

# Backing Easy Money

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Data and outlook as of July 31

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Note - Click on graphics to get to the Bloomberg terminal

## Fed Easing Is Good for Commodities, But Too Little, Too Late

Performance: July -7%, 2019 +4.4%, Spot +5.5%.  
(Returns are total return (TR) unless noted)

(Bloomberg Intelligence) -- Deflationary trends in commodities underpin central bank accommodation, but the first Federal Reserve rate cut in over a decade is unlikely to reverse the receding tide. Weak crude oil and base metal prices, as well as a strong dollar are indicators that the Fed can keep easing. A peak greenback is a prerequisite for a broad commodity market recovery, but this is unlikely near term. A key factor to accelerate Fed easing and beat the buck is a shift to an underperforming U.S. stock market, making commodities increasingly inversely subject to equities. We see little to arrest the breakout trend in gold's climb and view corn and grains similarly. Technical foundations are alike, while the fundamentals are unique. Crude oil and base metal price trends turned lower last year, with few signs of reversing the ebbing tide.

## Ebbing Broad Commodity Tide

**Weak Commodities Support Ease, Peak Greenback Needed for Trough.** The Federal Reserve's reversal of the rate hike seven months ago will do little to shift the commodity market slide, but it rewards forbearing gold bulls in our view. The almost 12% 2H18 decline in the Bloomberg Commodity Index indicated the Fed shouldn't have hiked in December. A dollar peak is needed for a broad commodity trough.

**Dormant Commodity Bull Needs Dollar to Break Down.** The broad commodity market should remain under pressure until the dollar stops rallying, which is unlikely in the near term, in our view. Indicating a lack of inflationary pressure, the Bloomberg Commodity Spot Index (BCOM) is at about the same level as the last time the Fed started an easing cycle 12 years ago. Of greater significance for commodities is the almost 24% appreciation in the trade-weighted broad dollar since September 2007. Unchanged commodity prices despite an appreciating greenback is a sign of divergent strength.

Fed easing is a headwind for the dollar, but the expected pace appears insufficient to spark some reversion. Near life-of-index highs, the broad dollar has plenty of mean reversion room when it does peak. The annual beta of the BCOM vs. the dollar is about minus 1.4x over the past 30 years.

## Initial Fed Ease Unlikely to Peak the Buck



**Dollar Set for Appreciation, Driven by U.S. Stocks.** If commodities end up outperforming stocks, it's unlikely to be because of stronger prices, if history is a guide. A primary force pressuring commodities is the strong dollar and a key indicator for the rallying greenback is the U.S. stock market's outperformance vs. the world. Our graphic depicts the trade-weighted broad dollar on the cusp of breaking out to new highs. Its primary companion -- the stock market -- has done so (the S&P 500 vs. the MSCI World Ex-U.S. Index) and Fed easing appears unlikely to end this trend unless it gets much more aggressive.

## The Greenback is Poised to Continue Rallying



A primary force to increase the pace of rate cuts is a declining stock market, which would increase lose-lose risks for most investors. The ratio of the Bloomberg Commodity Spot index to the S&P 500 is near the lows from 2002 when the dollar last peaked.

**Macro Outlook - Higher Gold, Lower Crude.** There's 2H potential for the top (crude oil) and bottom (the dollar) macroeconomic performers to trade places. Gold's advance appears to have among the strongest foundations. The metal is showing divergent strength to the advancing greenback. Despite the one-year gain of about 4% in the trade-weighted broad dollar, gold has advanced almost 16% vs. 6% for the S&P 500. Increasing risks of a resumption of a volatility flare-up from 4Q18 favors gold and is a primary force to increase Fed-easing expectations, thus adding headwinds to the strong greenback.

**Primary Reversal Risk: Top Performing Crude Oil**

Security	%YTD	Chg July	Chg QTD	1Yr %	2Yr %
			Pct	Chg	Chg
Generic 1st 'CL' Future	+27.5%	-1.0%	-0.8%	-15.6%	15.6%
S&P 500 Total Return Index	+20.2%	+1.4%	+1.4%	+8.0%	25.5%
S&P 500 Index	+18.9%	+1.3%	+1.3%	+5.8%	20.6%
MSCI World ex USA Net Total Re	+13.4%	-1.1%	-1.1%	-2.2%	4.2%
Gold	+10.3%	+3%	+3%	+15.5%	11.4%
Bloomberg Barclays U.S. Treasu	+10.3%	-0.8%	-0.8%	+13.1%	12.2%
MSCI Emerging Markets Net Tota	+9.9%	-0.6%	-0.6%	-1.6%	2.7%
Bloomberg Commodity Spot Index	+5.5%	-1.0%	-1.0%	-4.2%	1.6%
Bloomberg Commodity Index Tota	+4.4%	-0.7%	-0.7%	-5.4%	-2.8%
Bloomberg Dollar Spot	+1.1%	+1.8%	+1.8%	+2.9%	4.8%
Generic 1st 'HG' Future	+1.0%	-1.9%	-1.8%	-5.7%	-8.0%
US Trade Wgt Broad Dollar Indx	+3%	+0.8%	+0.8%	+3.5%	7.3%

Crude oil is vulnerable. Prices have bounced, yet the 52-week mean has turned lower along with unfavorable demand vs. supply conditions. Copper's poor showing on a one- and two-year basis reflect the receding global economic tide unlikely to reverse, at least in the near term.

**Sector Outlook - Gold and Grains Glow.** Our sector outlook favors further precious metals appreciation, while top-performing energy appears more transient. Crude oil ending last year near the lower end of its four-year range is the primary reason for its good showing in 2019 through the end of July. The 4Q energy swoon shifted oil's 52-week trend southward, and we see few indications it should reverse. Gold is the opposite. Reflecting similar unfavorable macroeconomic trends, gold prices should continue to advance. Fed easing is a tailwind.

**Precious Metals Likely to Overtake Energy**

Security	%YTD	Chg July	Chg QTD	1Yr %	2Yr %
			Pct	Chg	Chg
Bloomberg Energy Subindex Tota	+10.8%	+1%	+1%	-10.3%	10.6%
Bloomberg Precious Metals Subi	+9.7%	+2.4%	+2.4%	+13.2%	7.4%
Bloomberg All Metals Total Ret	+7.9%	+1.9%	+1.9%	+3.4%	4.0%
Bloomberg Industrial Metals Su	+6.2%	+1.4%	+1.4%	-5.3%	-1%
Bloomberg Grains Subindex Tota	-3.7%	-5.7%	-5.7%	-11.5%	-19.7%
Bloomberg Agriculture Subindex	-4.0%	-5.1%	-5.1%	-11.5%	-21.8%
Bloomberg Livestock Subindex T	-4.2%	+2.9%	+2.9%	+3.8%	-5.5%
BBG Softs TR	-5.1%	-5.2%	-5.2%	-11.3%	-28.2%

Spot grain prices are barely up this year, but are likely to get a boost, notably on the back of a disappointing Corn Belt harvest. Grains, under pressure from the collapse of China imports from the U.S., have limited downside risks. Industrial metals are similar to crude oil, with the trend shifting down.

**It's Still All About an Outperforming U.S. Economy.**

*Contributing Analysts Audrey Childe-Freeman*

While the U.S. economy may have come off last year's high amid data on weakening housing and business investment that can't be ignored, the country's economy continues to lead G7 peers and crucially, the gap seems to have widened. The bottom line is that U.S. GDP is less exposed to the drag from global-trade tensions and its consumer sector is outperforming, with 2Q consumption at 4.3%.

**U.S. Economic News Surprises to the Upside Again**



Recent U.S. monthly indicators have surprised to the upside, while in the euro zone and especially in Germany, there's been more disappointment. The uncertainties from trade and Brexit risk weighing on the euro zone economy well-into 4Q, making it likely the U.S. run could extend. For now, it's difficult to challenge the dollar bulls when it comes to the economic cycle.

**The Fed Is Easing, But So Are Other Central Banks.**

*Contributing Analysts Audrey Childe-Freeman*

If the Federal Reserve delivers our expected 25-bp rate cut this week, it may be bullish for the dollar to the extent that it's less than the 50-bp reduction priced in a few weeks ago and considering that the Fed isn't alone in going back onto an accommodative path.

Take the ECB: While a 10-bp interest-rate cut expected in September would be less than a 25-bp Fed cut (theoretically this would be bullish for euro-dollar), that would bring the main refinancing rate into negative territory and mean that the U.S. absolute yield advantage remains unchallenged at this stage of the cycle. Moreover, with the exception of Norges Bank, all other G10 central banks have, or are about to embark onto an easing cycle, and this implies that the monetary policy-driven currency bearish story isn't just about the dollar.

**Back to Monetary Easing: Fed Isn't Alone**

Central Bank	Current Rate	6 Months Policy Outlook *
Federal Reserve	2.50%	25bp cut in July, further cuts feasible before year-end.
European Central Bank	0.00%	10bp cut in Sep, fresh QE by year-end.
Bank of Japan	-0.10%	Easing chances are on the rise.
Bank of England	0.75%	Brexit driven, but rate hike talks off the agenda
Swiss National Bank	-0.75%	10/20bp rate cut feasible post ECB.
Norges Bank	1.25%	25 bp rate hike feasible by year-end.
Riksbank	-0.25%	Easing talks may return as the ECB cuts rates.
Bank of Canada	1.75%	Neutral stance for now.
Reserve Bank of New Zealand	1.50%	25bp rate cut possible in August.
Reserve Bank of Australia	1%	Another 25bp rate cut feasible in August.

\*Source: Bloomberg Intelligence Estimates.

**Energy**

(Index weight: 29% of BCOM)

Performance: July +.1%, 2019 +10.8%, Spot +11.1%

\*Note index weights are the 2018 average.

**Riding a Receding Tide**

**Crude Oil, Energy Prices Vulnerable to Ceding More 1H Gains.**

The crude-oil and energy-sector process of giving back 1H gains should continue, in our view. As the global economic tide recedes and technological advances sway the industry, oversupplied liquid fuels need sustained support from geopolitical events or OPEC+ production cuts to avoid price weakness since 2014. A return of increasing stock-market volatility and plunging crude prices from 2H18 pose the greatest risks, as we see it. The 52-week mean for crude oil turned south in 4Q, with few signs of fading.

Strong U.S. liquid-fuel production and slack global demand are primary drivers that elevate the prospect of West Texas Intermediate gravitating toward \$40 a barrel support vs. about \$58 at the end of July. What was key resistance near \$70 last year has dropped to \$60 this year.

**Disinflationary Energy**

**Crude Oil Confined to Range, With High-End Figure Prone to Risk.** There's scant evidence to suggest the Federal Reserve's first interest-rate easing cycle in over a decade will end the downward trajectory in energy prices, as we see it. Plunging crude oil prior to the central bank's December hike indicated the Fed should have refrained. Resuming 4Q's energy-price swoon is the likelier outcome.

**Energy Disinflation Supports Fed Easing.** The inability of the world's most significant commodity -- crude oil -- to indicate inflation appears entrenched. There's fuel for accommodative monetary policy, especially with a lower WTI crude-oil peak during the most recent Fed tightening cycle vs. the apex near the inception of the previous easing period. Indications that it's different this time don't get much clearer. In September 2007, when the Fed first eased as the financial crisis ripened, WTI averaged \$79.63 a barrel. The high since the December 2015 rate hike is \$76.90.

**What's Different This Time? Energy-Price Deflation**



We see little to reverse the receding tide represented by declining crude oil prices. A continuation of the lower-crude-price trends in place since the 2008, 2011 and 2018 peaks becomes a bigger risk.

The Fed's expected July rate cut acknowledges what plunging oil prices indicated in December.

**Gold Is Turning Up, Crude Oil Down.** A key question for 2H is what it might take to reverse potentially accelerating gold bull and crude-oil bear markets. These trends that resumed in 2H18 are set to continue in the back half of this year, in our view. Gold ended the first week of July near the high from 2014. Its 12-month mean has turned higher. Macroeconomic drivers -- rapidly declining sovereign debt yields, mean-reverting higher stock-market volatility and reversion risks in the elevated dollar -- are quite positive for gold.

**Gold is Lifting Resistance, Opposite in Crude Oil**



The opposite is the case in crude oil. Oversupplied amid declining demand and a slowing global economy mired in trade tensions, West Texas Intermediate turned down in October and this year appears as a dead-cat bounce. WTI is holding resistance near \$60 and its downward-sloping 12-month mean despite OPEC+ supply cuts.

**\$40 a Barrel at Risk of Becoming the New \$50 in WTI Crude Oil.**

West Texas Intermediate crude oil should be closer to \$40 a barrel if its relationship with inventories holds. Our graphic depicts the 52-week average of the total change in Department of Energy crude oil inventories at its greatest since September 2016, when WTI averaged \$45. What may be more important is the trend: Inventories were declining three years ago and they're rising rapidly now.

**Inventories Put Crude Oil Prices Under Pressure**



Last year's \$42.36 low is in jeopardy based on the autoscaled chart. WTI near \$51 on June 5 has returned to the halfway mark of the 2016-18 rally. It's back in a good support zone nearing \$50, but absent a sharp reversal in increasing inventories, prices should remain pressured. The paradigm shift in U.S. liquid fuel production, which is likely to exceed consumption this year, should keep inventories on the rise.

**A 'Get Me Out' Trend**

'Get-Me-Out' Hedge-Fund Trend in Crude Oil Appears Enduring. There's little to reverse the downtrend in crude-oil prices and hedge-fund selling in crude oil futures, as we see it. Exiting overweight long positions from last year remains the primary activity and appears poised to continue.

**A Clear Downtrend in Crude Oil Prices, Positions.** The primary question in crude prices and net-futures positions is what it might take to end the downtrend. Our graphic depicts the rapidly declining 52-week average in petroleum futures managed-money net positions. What's significant is that this measure has just only returned to the mean since 2011 (about 13.5% of open interest). Last year's high was near 21%. "Trend-is-your-friend" risks point to further price weakness as hedge funds continue to back away from 2018's offside extreme near the price peak.

**What Might It Take to End Weakness?**



Last year's position tally was similar to 2014, before prices collapsed. Excess U.S. supply and declining demand, along with global GDP revisions and a downtrend in prices as indicated by the 52-week mean, portend an enduring bear market.

**WTI Leading Year-Over-Year Liquidations.** Hedge funds' long-position liquidation in West Texas Intermediate (WTI) futures is a primary pressure point for crude-oil prices. Over 200,000 of reduced WTI managed money-net positions in 2019 leads the major commodity futures year-over-year. Corn is the opposite, with more than 300,000 of inflows. Our fundamental and technical outlook favors a continuation. The downturn in crude-oil prices likely ended a three-year recovery on the back of oversupply and slack demand. Corn appears to be in an early bull market following an extended downtrend on diminishing U.S. supply.

**Crude-Oil Long Liquidation Appears Enduring**

Name	Current	5 Day Change	1 Mth Change	3 Mth Change	YTD Change	1 Yr Change	2 Yr Change
Net - Managed Money Total/Disagg							
Single Commodities							
Corn	153,216	-34,044	9,701	475,431	55,404	283,413	46,401
Gold	217,517	-2,371	27,836	239,845	160,568	244,675	142,469
Coffee	-14,867	-4,044	20,503	63,623	-41,479	74,736	-6,898
Silver	54,161	26,065	49,413	72,031	45,585	65,504	45,273
Soybean Oil	-39,175	-7,981	3,571	11,462	12,327	50,777	-101,803
Lean Hogs	33,699	-470	-1,412	-28,054	8,960	36,699	-43,603
Platinum	915	6,314	21,974	-21,858	5,479	27,990	8,583
Soybeans	-38,489	446	16,818	91,077	-27,944	22,826	-89,374
Palladium	14,087	61	3,077	4,791	872	12,290	-7,939
Nickel	42,230	-664	-1,792	12,113	13,772	5,041	22,602
Gasoline	91,194	-9,062	15,535	-20,955	38,078	566	62,564
Copper (CME)	-30,583	6,671	13,476	-23,983	-10,387	-4,233	-116,206
Aluminum (Post-MiFID II)	135,138	-8,317	1,599	-5,229	1,248	-5,292	
Zinc (Pre MiFID II)	79,906	-1,121	-6,682	3,640	-471	-8,898	44,606
Aluminum (Pre-MiFID II)	163,475	6,307	-3,292	21,105	3,315	-10,481	115,362
Copper (LME) (Post MiFID II)	13,793	-5,844	-3,259	-4,299	-16,715	-10,782	
Wheat	11,779	-6,972	-10,934	79,771	28,783	-12,163	-16,071
Zinc (Post MiFID II)	40,424	-6,510	989	-15,499	3,912	-16,330	
Live Cattle	26,818	1,375	-9,902	-127,732	-59,441	-21,740	-83,884
Copper (LME) (Pre MiFID II)	37,448	-917	-16,651	-27,111	-31,597	-34,385	25,052
HRW Wheat	-18,337	-2,181	2,407	35,336	-20,772	-40,395	-78,992
Heating Oil	6,406	-1,030	20,665	2,363	4,030	-49,791	7,441
Sugar	-143,298	-75,449	-85,779	-113,632	-103,926	-63,359	-40,578
Soybean Meal	-25,679	-4,665	-25,697	-6,250	-25,065	-75,619	-21,298
Brent Crude	256,319	-24,101	-15,187	-139,947	94,070	-111,321	-32,252
Cotton	-45,230	-960	-14,845	-59,327	-61,233	-126,688	-63,885
Natural Gas	-184,231	-37,143	-34,605	-223,657	-377,341	-209,215	-257,769
WTI Crude	170,840	-28,804	24,102	-143,547	53,239	-221,307	-67,661

**Trend Is Your Friend But a Headwind for Crude.** WTI crude oil is at elevated risk of heading toward \$40 a barrel after failing to sustain above \$60, in our view. Since the end of June, WTI has flirted with its downward-sloping 52-week mean. Geopolitics and OPEC+ cuts have been shorter-term tailwinds, but U.S.-led oversupply and declining global demand should remain the predominant headwinds. Our graphic depicts the similar vulnerability of the Russell 2000 Index (RTY) to the same mean.

**Shared Vulnerability, WTI Crude Oil & Russell 2000**



If the RTY can't sustain above its annual weekly mean, crude headwinds are increased. Both the index and crude oil need worthy bullish catalysts to reverse downward trajectories that began last year. The trend is your friend risk vs. reward favors the downside, particularly with recent revisits above negatively sloping 52-week means.

**Trading-Places Risk: Weak Gas and Crude Oil.** There's 2H potential for the top (crude oil) and bottom (natural gas) performers to trade places. Natural gas may increase, with a preponderance of hedge-fund shorts at risk of having to cover entering heating season near the lower end of the price range. The Bloomberg Natural Gas Subindex Total Return, down about the same as front-futures prices, indicates a positive demand vs. supply shift from a flatter curve than the typically steep contango. The best of this year's crude-oil recovery is likely over, with risks tilting toward resuming the 4Q swoon and gravitating toward last year's low near \$42.36 a barrel instead of 2019's high (\$66.60).

**Crude Oil In the Process of Giving Back 2019 Gains**

Security	%YTD	Chg July	Chg QTD	1Yr % Chg	2Yr % Chg
Bloomberg Unleaded Gasoline Su	+34.1%	+7%	+7%	-9.4%	12.4%
Bloomberg WTI Crude Oil Subind	+26.8%	+3%	+3%	-13.9%	20.0%
Bloomberg Petroleum Subindex T	+25.4%	+7%	+7%	-10.4%	24.2%
Bloomberg Brent Crude Subindex	+25.1%	+8%	+8%	-8.2%	37.0%
Bloomberg Heating Oil Subindex	+18.8%	+1.4%	+1.4%	-5.9%	23.6%
BBG Energy Spot	+11.1%	-3%	-3%	-13.6%	8.5%
Bloomberg Energy Subindex Total	+10.8%	+1%	+1%	-10.3%	10.6%
Bloomberg Natural Gas Subindex	-24.3%	-1.9%	-1.9%	-19.0%	-30.7%

**Front Energy Futures to July 31**

Ticker	Last	%YTD	%MTD	Chg QTD	1 Yr Ago	2 Yrs Ago	%1YR	Change 2 Year
Generic 1st 'XB' Future	\$190.2	+43.7%	-2.1%	-2.1%	212.9	170.6	-10.7%	11.5%
Generic 1st 'CL' Future	58.0	+27.7%	-0.8%	-0.8%	68.8	50.2	-15.6%	15.6%
Generic 1st 'CO' Future	\$65.2	+21.1%	-2.1%	-2.1%	74.3	52.7	-12.2%	23.8%
Generic 1st 'HO' Future	\$195.5	+16.3%	+5%	+5%	213.2	165.2	-8.3%	18.3%
Generic 1st 'NG' Future	2.2	-23.7%	-2.8%	-2.8%	2.8	2.8	-19.4%	-19.7%

**Curve Analysis – Contango (-) | Backwardation (+)**

Name	Current Position	1 Yr Ago	1 Yr Change	YTD Change
▼ 1 Year Spread % of First C...				
▶ BCOM	-4.2	-3.6	-0.6	0.8
▼ Sector				
▶ Energy	-0.6	4.3	-4.9	1.6
▶ Industrial Metals	-1.8	-1.5	-0.3	-0.6
▶ Precious Metals	-2.4	-2.8	0.4	0.7
▶ Livestock	-6.0	-9.9	3.9	-4.3
▶ Agriculture	-8.9	-6.6	-2.3	0.0
▼ Single Commodities				
Unleaded Gas	6.8	3.6	3.3	10.0
Brent Crude	5.5	2.5	3.1	8.7
Crude Oil	4.6	6.7	-2.1	11.6
Gas Oil	2.8	-0.2	2.9	6.8
Heating Oil	2.4	-0.3	2.7	5.8
Palladium	1.0	1.0	0.1	-3.1
Zinc	0.5	1.7	-1.2	-2.9
Copper (LME)	-0.9	-1.3	0.4	-0.9
Nickel	-1.6	-2.2	0.6	1.5
Platinum	-1.7	-1.7	0.0	0.3
Copper (CME)	-1.8	-3.0	1.2	-1.0
Gold	-2.3	-2.7	0.5	0.7
Silver	-2.6	-2.9	0.3	0.7
Cotton	-3.2	7.5	-10.7	-0.4
Corn	-3.9	-9.1	5.3	4.7
Live Cattle	-4.2	-3.7	-0.5	-9.4
Aluminum	-5.0	-2.6	-2.5	0.3
Soybean Oil	-6.4	-6.6	0.2	-0.2
Wheat	-7.0	-8.2	1.2	3.0
Soybean Meal	-7.1	1.9	-9.0	-1.8
Lean Hogs	-7.8	-16.2	8.4	0.8
Soybean	-8.3	-5.7	-2.6	-1.1
Natural Gas	-8.8	5.1	-13.9	-6.8
Sugar	-12.0	-15.3	3.2	-2.7
Coffee	-14.0	-12.6	-1.5	2.0
HRW Wheat	-15.2	-10.4	-4.8	-1.7
Thermal Coal	-17.5	12.8	-30.4	-25.1

Measured via the one-year futures spread as a percent of the first contract price. Negative means the one-year out future is higher (contango). Positive means the one-year out future is lower (backwardation).

## Metals

**All** (Index weight: 35% of BCOM)

Performance: July +1.9%, 2019 +7.9%

**Industrial** (Index weight: 19.0% of BCOM)

Performance: July +1.4%, 2019 6.2%, Spot +5.1%

**Precious** (Index weight: 16.1% of BCOM)

Performance: July +2.4%, 2019 +9.7%, Spot +10.6%

## Shining Gold vs. Fading Base

**Metals Set for Appreciation With Fed's Easy Money, Peak Dollar.** Further price appreciation in the broader metals sector is more likely than a peak greenback amid the Federal Reserve's policy flip to easing, in our view. A dollar decline is a potential catalyst for faster appreciation in metals prices, but expectations for interest-rate cuts appear just too gradual vs. the rest of the world's pace of accommodation. Strong gold prices should remain the stand-out, with unfavorable macroeconomic implications. Silver, however, packs plenty of potential upside.

Very short copper boosts short-term recovery potential, but the tide has turned to the downside for industrial metals, with few catalysts capable of driving a definitive reversal. Nearing good support levels, copper and base metals appear in more of a tactical trading environment than buy-and-hold gold.

## Broad Upside with Easier Money

**From Gold to Copper, Metals Gaining Upper Hand With Fed Easing.** The broad metals sector, with the highest negative correlation to the dollar, is poised to appreciate on the back of the Federal Reserve shifting course to an easy-money policy, we believe. Divergent strength vs. the lofty dollar is a key takeaway for metals price performance.

**Metals on Sound Footings With Easy Money.** A primary determinant of metals sector performance in 2H and beyond is the potential for the dollar to stop appreciating on the back of Fed easing. Interest-rate cuts should be a headwind for the buck, particularly with the trade-weighted broad dollar near a historical high (1973), but the trend remains up and until it reverses, appreciation in the Bloomberg All Metals Total Return Index should be limited. To the extent that global economic growth further deteriorates, metals should be somewhat insulated, notably from gold's appreciation potential.

Our graphic depicts the narrowing wedge pattern in the all-metals index and the longer-term upward bias. Down about 35% from the 2011 peak offers plenty of mean-reversion room. The index is minus 0.71 correlated to the dollar annually since 1997.

## Metals Just Waiting on Peak Dollar to Appreciate



**A Firming Foundation With EM Equities.** Metals' prices appear too cold vs. emerging-market equities. Among the highest correlated measures to the Bloomberg All Metals Total Return Index, the MSCI Emerging Markets Index has been on sounder footings since both bottomed near the start of 2016. Catch-up potential should favor further appreciation in metals, and U.S.-China trade negotiations are playing a key role. With talks stalled, no agreement on the horizon and U.S. tariffs already hiked on most imports from China, it appears tensions are unlikely to get much worse, notably vs. the upside potential of a definitive agreement.

## Catch-Up Potential Favors Metals vs. EM Equities



Our graphic depicts the all metals index closely tracking the declining China manufacturing purchasing index (PMI). Nearing multiyear lows, upside in the PMI index should outweigh further downside risks.

## Gold and Fed Launchpad

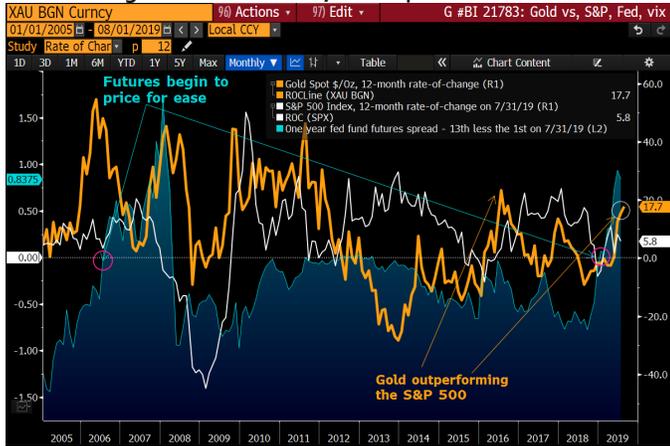
### Gold, Precious Metals Appear to Sit on Fed's Easing Launch Pad.

Approaching six-year highs in anticipation of the Fed's pivot to easier money, gold prices may back-and-fill for awhile but will continue to appreciate, in our view. If history is a guide, a peak dollar will be needed for the diversifier to continue its year-over-year outperformance of its primary competitor, the U.S. stock market.

**Disconcerting Gold Outperformance Trend Appearing More Enduring.**

The inception of a Fed easing cycle is a prime potential catalyst for the price of gold to outperform the stock market, if recent history is any guide. For the second time in seven years, the 12-month rate-of-change of spot gold is exceeding that of the S&P 500 Index. Since 2012, for only a brief period at the onset of the rate-hike cycle as the gold bear market ended did the metal outperform equities. Back then, recovering gold appeared to be looking ahead to the rate-hike end game. Sustaining near six-year highs, the metals price recovery appears entrenched.

**Gold Getting its Fed End-Game, The Flip to Ease**



Rallying gold doesn't mean the stock market should decline, but if the S&P 500 can't add some distance above 3,000, or declines, it's more likely to increase the pace of Fed easing, supporting gold prices and adding headwinds to the dollar.

**Stocks Overshadow Gold Unless Dollar Has Peaked.** The extent to which Fed easing can reverse the appreciation of the dollar should be the primary factor behind gold's showing vs. U.S. equities. Our graphic depicts spot gold outperforming the S&P 500 Index during the past two easing cycles, notably on the back of the depreciating trade-weighted broad dollar index. During the 1980s-1990's easing cycles, gold trailed the S&P 500 as the dollar gained.

**Peak Dollar Needed for Gold to Shine vs. Stocks**



The global race to lower rates appears to place Fed behind the curve, which supports further dollar appreciation. With almost four 25-bp reductions priced into fed fund futures during the coming year (the most since 2008), it appears rate-cut expectations will

need to increase rapidly to expect an end to the strong dollar. A primary force for that is a weakening stock market.

**Fed Easing Solidifies Gold-Price Foundation.** Gold prices appear on a similar launchpad as 2001 when the Fed began an easing cycle. The greatest bull market of this millennium so far began about the time of that first rate cut, following an extended gold-price downdraft and rally in the dollar. Fast forward and the first expected rate cut in 11 years comes on the back of the trade-weighted broad dollar near its historic high from 2002 and spot gold about 25% below its 2013 peak. When the Fed first eased in January 2001, gold was about 35% below its 1996 apex. Commencing an easing cycle could be a catalyst for gold to retrace the previous bear market.

**Gold Recovery Supported by Fed Course Reversal**



The widely expected 25-bp cut on July 31 will cancel out the December hike, suggesting that move was a mistake. The gold bull market that began around the initial December 2015 rate hike appears set to accelerate.

**Gold May Take Easy Route to Recapture 2013.** Gold is in a rare situation where stock-market volatility and the dollar favor greater price appreciation. Unless the Fed shifting to an easing cycle results in sustaining a stronger dollar or weaker CBOE S&P 500 Volatility Index (VIX), gold should rally on. We view rate cuts as a potential catalyst for reversion from extremes in these primary gold drivers, giving the yellow metal support to complete what appears to be its initial mission -- retracing the 2013 plunge.

**Gold Has Plenty of Upside vs. Low VIX, High Dollar**



Our graphic depicts the recovering VIX 100-week average from near multidecade lows and gold near the halfway mark of the 2013 decline, which was the worst since 1981. Some combination of a

stronger dollar and weaker VIX should be required for gold not to continue toward \$1,700 an ounce, about the high from 2013.

**Gold Bull Likely Pausing and Refreshing.** Hedge funds' net-long futures positions are a bit extended, but indicate that gold is in the early days of a bull market. Our graphic depicts the 52-week average of CME gold managed-money net positions recovering from the lowest level since 2006. Last year's record shorts were a key pillar for the current bull market. Net longs are near the 2016-17 peak, potentially limiting price appreciation in the near term, but pause-and-refresh of the uptrend is more likely, in our view.

**Gold Positions Indicate Longer-Term Recovery**



Gold's average price in July (about \$1,415) is the highest since 2013 and appears to be marking time. The 52-week moving average has turned higher, and gold is about 11% above its mean on July 24; the 2016 peak was about 16%. The average in the 2001-12 bull run was about 7%.

**Hedge Funds Catching Up to Bullish Gold ETFs.** Seemingly unstoppable flows to gold exchange-traded funds are gaining companionship from hedge funds, supporting the metal's price. Indicating just how offside hedge funds were in gold futures, if the year were to end in July, the annual average of managed-money net positions would be the least net-long since 2006. That's changing as positions shift more positive, but the mean-reversion potential from this extreme is indicative of gold's upside.

**A Gold Pillar - Upside Potential in Net Positions**



Our graphic depicts that gold is in the process of retracing the 28% downdraft in 2013 (the worst year since 1981). A potential increase in hedge fund positions supports our view that gold's initial mission is revisiting resistance near 2013's peak at \$1,700 an ounce.

**Gold Who? Silver Has Plenty of Upside Potential.** On the cusp of closing above key resistance, upside potential in the silver price has rarely been more extreme. Near the end of July, silver is set to hold above its 50-month average for the first time in six years. Breaching long-restrictive trend lines can be ephemeral, but this breakout packs plenty of possible punch. The Fed is reversing to an easing cycle, silver volatility and managed-money net positions are recovering from multidecade low/short extremes, and mean-reversion potential in the lofty dollar and low silver prices is hardly ever greater.

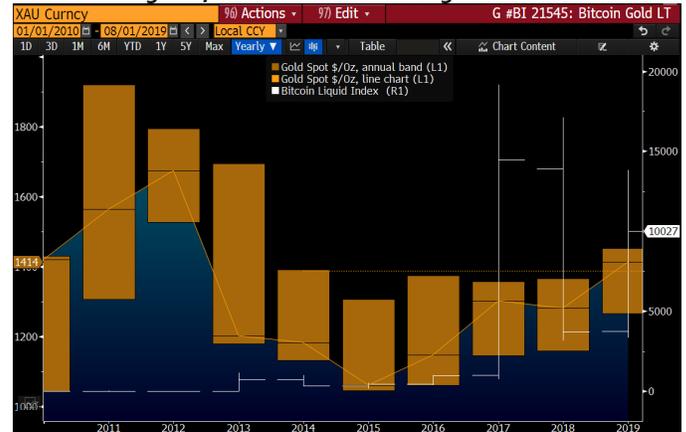
**Silver Set to Sustain Above 50-Month Mean**



Today's silver price would have to double just to revisit the halfway mark -- \$32 an ounce -- of the metal's 2011-15 bear market; Gold would need just a 5% bump as of July 26. Often referred to as leveraged gold, silver has a greater negative correlation to the dollar.

**On Annual-Range Basis, Bitcoin Is 'Meh' vs. Gold.** Bitcoin looks like a consolidating bull market, while gold is flirting with six-year highs. On an annual basis, Bitcoin is nothing spectacular in 2019, as this year's range is within 2018's, which didn't exceed the 2017 high and low. Favorable technical and fundamental conditions indicate to us that Bitcoin should exit its consolidation period higher. The announcement of Facebook's Libra coin is a potential win-win for advancing the Bitcoin price. If Libra succeeds, it adds legitimacy to the future of global digital payments, improving Bitcoin's uniqueness as a form of gold. If Libra fails, Bitcoin gains luster as the go-to store-of-value among all cryptos.

**Gold Breaking Out, Bitcoin a Consolidating Bull**



More countries with negative-yielding debt, Fed easing, political unrest in Hong Kong and recovering stock-market volatility are tailwinds for gold and Bitcoin prices.

### Ebbing Industrial Metals Tide

**Fed Easing Supports Copper, Base Metals, But the Tide Is Ebbing**  
 Heavily shorted copper is a prime candidate to pop amid Federal Reserve easing, but the limited extent to which an ebbing tide can reverse course will keep pressure on industrial metals' prices, in our view. Risks are increasing that the dollar will continue to strengthen while growth weakens in China.

**Industrial Metals View; Potential Lose-Lose.** Predominant trends in a weakening China Purchasing Managers Index (PMI) and strengthening dollar need to reverse for industrial metals prices to sustain solid footings, in our view. A definitive U.S.-China trade agreement is a potential catalyst, but unlikely at least in the short term. Federal Reserve easing should pressure the greenback, but the expected gradual pace appears too slow to offset faster central-bank accommodation in most of the rest of the world.

### The Base Metals Ocean Liner Makes a 180-Degree Turn



Our graphic depicting the Bloomberg Industrial Metals Spot Subindex appears like an ocean liner that has reversed course. It's heading south along with primary drivers. Fed easing is unlikely to reverse these trends. More aggressive easing is unlikely unless the macro tide recedes, as primarily influenced by the U.S. stock market.

**Short Copper Positions Are Price Supportive.** Hedge-fund positions in copper futures have dipped into a net-short territory that typically favor higher prices. Our graphic shows that net CME copper managed-money positions are about as short as seen in the past decade. The bear-market lows in 2016 marked the last time copper shorts approached 21% of open interest. In addition, the 52-week net-position mean is near similar lows. This indicates that prices are more susceptible to short-covering spikes on bullish catalysts than additional bearish news driving prices lower.

### Copper Likely Needs New Catalyst to Decline



Copper is stuck in the middle of trade tension and the weakening Chinese economy. Absent a definitive U.S.-China trade deal, sustainable upside in copper would likely need to come from a weakening dollar.

### PERFORMANCE DRIVERS

**Metals' Divergent Strength vs. the Greenback.** Metals are showing they'll oppose the dollar, which is consolidating near multidecade highs. Aluminum, the only constituent in the Bloomberg All Metals Total Return Index that's down in 2019 despite the unchanged U.S. trade-weighted broad dollar, is testament to the metals sector looking ahead to brighter days. The implication is unless the dollar can continue appreciating, broad metals-sector prices are poised to do so. Gold near the top of performers is a bit disconcerting from a global macroeconomic standpoint, but extols the diversification benefits of the all metals index.

Nickel, riding the wave of auto electrification, is still about 74% below its 2007 peak, indicating potential price upside on simple mean reversion. Copper tops the list of minus correlations to the dollar, near 0.70 annually over 20 years.

### Gold Among Top Performers - Disconcerting Macro

Security	%YTD	Chg July	Chg QTD	1Yr %	2Yr %
Bloomberg Nickel Subindex Tota	+35.9%	+14.4%	+14.4%	+3.5%	41.2%
Bloomberg Gold Subindex Total	+11.1%	+1.0%	+1.0%	+15.9%	11.2%
Bloomberg Precious Metals Subi	+9.7%	+2.4%	+2.4%	+13.2%	7.4%
Bloomberg All Metals Total Ret	+7.9%	+1.9%	+1.9%	+3.4%	4.0%
Bloomberg Industrial Metals Su	+6.2%	+1.4%	+1.4%	-5.3%	-1.1%
Bloomberg Silver Subindex Tota	+5.2%	+7.1%	+7.1%	+4.5%	-4.1%
Bloomberg Zinc Subindex Total	+4.3%	-1.8%	-1.8%	+1.9%	-1.3%
Bloomberg Copper Subindex Tota	+2.2%	-1.6%	-1.6%	-5.4%	-9.0%
US Trade Wgt Broad Dollar Indx	+3%	+8%	+8%	+3.5%	7.3%
Bloomberg Aluminum Subindex To	-4.2%	-4%	-4%	-14.7%	-6.5%

## Agriculture

(Index weight: 30% of BCOM)

Performance: July -5.1%, 2019 -4.0%, Spot -4.6%

**Grains** (Index Weight: 24% of BCOM)

Performance: July -5.7%, 2019 -3.7%, Spot +0.2%

**Softs** (Weight: 6% of BCOM)

Performance: Feb. -5.2%, 2019 -5.1, Spot -2.4%

### Sizzling Set For the Fall

#### Sizzle Risks? Agriculture Set to Heat Up When the Combines Roll.

The Corn Belt harvest, the primary determinant of agriculture prices, is likely to disappoint and boost prices, in our view. Secondary recovery catalysts would include a definitive U.S.-China trade accord and/or a peak in the dollar. Both are unlikely, though the first Fed interest-rate cut in 11 years is in the right direction to suppress ag-price pressure from a strong greenback. Both factors would be longer-term positives, due to elevated reversion potential. Chinese imports of U.S. grains have basically been shut down, and the trade-weighted broad dollar is near a record high.

Corn should remain the primary driver of an overdue ag-price recovery. The world's most significant grain sustaining above \$4 a bushel for the longest period in five years is an indication of strength.

#### From Corn to Wheat, Agriculture Upside Potential May Be Sizzling.

Our longstanding premise that agriculture-price upside far outweighs downside risk is intact, with climate change the prime catalyst. Yet if history is guide, a peak greenback (similar to 2002) is a key ingredient. Fed easing would be supportive of ag-price gains.

**Agriculture-Price Recovery Barely in Early Days.** Ag prices are on the cusp of sustaining above long-enduring resistance levels on the back of peaking stocks-to-use and/or a recovery in Brazil's currency.

A depressed real and reversion potential in U.S. grain stockpiles near 30-year highs increase the probability of the Bloomberg Agriculture Spot Index breaching its downward-sloping 60-month mean. The setup for ag prices was similar in 2002.

#### Stocks and Real Reversion Potential Support Ags



Stocks-to-use should peak in 2019 with a break from years of very favorable Corn Belt weather. Increasing volatility in weather extremes appears entrenched, which should put a damper on

improving yields. Expectations for an improvement in the wetter-than-normal Corn Belt sowing season this year may be too optimistic for next year.

**Climate Change a Potentially Big Ags Spark.** Agriculture prices could surge as they signaled in 2002, with climate change a potential catalyst. Wetter, drier or hotter conditions are becoming more normal for key global farming nations. Our graphic portrays the technical condition of the Bloomberg Agriculture Spot Index as a powder keg. The 36-month Bollinger Bands have never been narrower for longer. Upside price potential far outweighs the downside, as we see it.

#### A Powder Keg Seeking a Spark – Agriculture



A similarly tight range in 2001-02 preceded the 300%-plus rally in agriculture prices to the 2011 peak. The near-30% decline in the trade-weighted broad index contributed to ag-price gains during the period. At the same level as the 2002 peak, dollar-decline risks are similar, as weather volatility increases with climate change.

### Wheat Prices Feeling the Heat

**Feeling the Heat? Higher Wheat Prices Likely With Climate Change.** Reversion potential in both historically lofty wheat stocks-to-use data and the dollar favor increasing wheat prices as a prime benefactor of climate change. As wheat is grown in virtually every country, we believe increasing climate volatility is a key catalyst to accelerate nascent trends in declining wheat stockpiles and climbing prices.

**Wheat Is the Tinderbox, Climate the Rally Spark.** Climate change is a prime candidate to ignite what we view as a nascent wheat-price recovery. Our graphic depicts Chicago wheat prices in early recovery days from historically low levels, along with a peak in the measure of world stocks-to-use from the USDA. Production is globally dispersed, but in Europe it's concentrated. Record-high temperatures and diminishing precipitation may become a recurring theme.

A recent USDA report focused on the risks of U.S. corn and soybean output, under duress due to excessive moisture. Increasingly volatile weather may also provide a similar bid under grain-price volatility. Bloomberg Grains Spot Subindex 260-day volatility reached a two-decade low last year.

**Mean Reversion Potential Supports Wheat Prices**



**Hot-Dollar, Cold-Wheat Reversion Risks Elevated.** A potential peak dollar on the back of Federal Reserve easing adds another pillar to the foundation for advancing wheat prices. Our graphic depicts the trade-weighted broad dollar near its record high and an increasingly negative correlation to wheat prices. The wheat-price rally to the 2008 peak was at least partially fueled by the dollar apex from similar levels in 2002. Wheat prices are about 60% below the high from 11 years ago, indicating the extent of potential mean reversion.

**Peak Greenback Supports Wheat-Price Bottom**



Chicago wheat prices surged 400%-plus in 2002-08. The halfway mark of the decline since is near \$8.47 a bushel, about 70% above July 25.

**Prices Supported by Supply Lagging Behind Demand.** Wheat prices appear to be at a discount to the global-production measure, which is falling behind consumption. In 2018, for the first time in four years, the 12-month average ratio of USDA wheat demand vs. supply estimates exceeded par. Chicago wheat prices are recovering but appear still relatively discounted on the back of surplus inventory. The \$4.80-a-bushel price in early May is well below the 2011-13 average near \$7.20, the most recent period when demand sustained above supply.

**Wheat Price Diverges From Consumption/Production**



Measured annually, the demand vs. supply ratio doesn't have the highest correlation to prices -- 0.40 on an annual basis vs. 0.56 for exports over the past 25 years. What's most significant is the trend, which is favorable and unlikely to shift to a sustained negative until higher prices give farmers the incentive to produce more.

**Looks Like Wheat Is in Bottoming Process.** Wheat prices seem to be on a path to longer-term recovery. Since the bottom three years ago, the 24-month average has turned higher along with U.S. exports as a percentage of production. The prior example is 2010-11, when prices bottomed from similar levels, then more than doubled to the 2012 peak. Notably due to declining output on the back of low prices, exports-to-production rose over 50% in 2017 and have remained above this threshold for the longest since 2003.

**Bottoming Wheat Poised to Catch Up to Exports**



Likely due to the U.S. being a swing exporter, and wheat futures traded and delivered in the U.S., wheat has among the highest historical positive correlations to exports. In the 2012-16 bear market, the U.S. exported only 45% of production. Since 2016, the average has been 52%.

**Corn & Grains Summer Doldrums**

**Summer Doldrums -- Pausing and Refreshing the Corn, Grains Bull.** It's the season for corn and grains to decline, but peak-growing-season price pressure should be limited in this abnormal year. Approaching harvests, volatility should be worthy of the

historically challenging Corn Belt sowing season. Prices and volatility are in the early ripening stages, in our view.

**Just Another Ho-Hum Grains Year Unlikely.** Grains markets are overdue for a burst of volatility, which is more likely to coincide with higher prices. Our graphic depicts just another ho-hum 2019 for the moribund grain markets. The Bloomberg Grains Spot Subindex has simply revisited the downward-sloping trendline since 2014 along with 30-day volatility. This year's historically wet and challenging Corn Belt sowing season should introduce reciprocal growing- and harvesting-season price volatility. Grains-index 30-day volatility remains below the summer season peaks of the past five years.

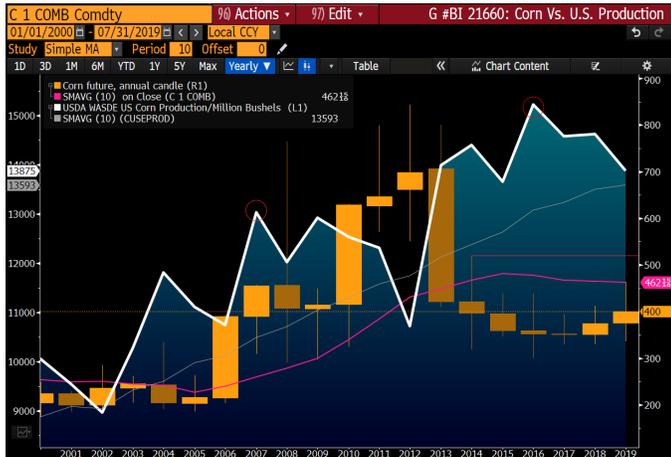
**Volatility and Prices Remain Historically Dormant**



Mean-reversion risks in annual, 260-day volatility near multidecade lows are similar to earlier in the millennium as grain prices advanced into the 2012 peak. In 2012, 30-day grain volatility peaked near 38% vs. the current 24% and 260-day at 18%.

**Corn-Production Optimism Should Succumb to Reality.** It'll take something unusual to prevent corn prices from advancing toward five-year highs, in our view. Having revisited the 2015-16 peak, the \$5.19-a-bushel high from 2014 is a resistance target. U.S. production is the driver; we expect about a 20% output reduction. The potential for favorable weather to make up for a historically challenging sowing season is very low. Our broader view is that climate change should continue to increase volatility in weather extremes, elevating summer-sizzle and early-frost risks, notably with this year's late crop.

**Production Estimates Should Continue to Decline**

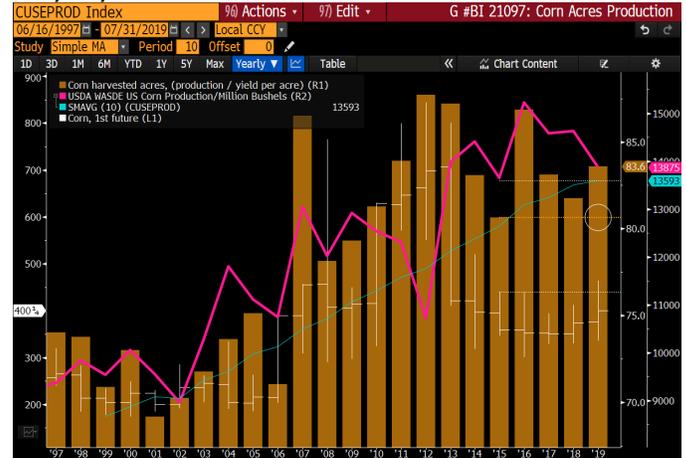


Corn should be well-supported at the 2017-18 highs near \$4. More sustained mean reversion in favorable production is a key risk. The discount of about 4% in the December 2020 corn price vs. 2019 may also be too optimistic for a sharp output rebound.

**Corn Production Cut Starts Slow Leak in Estimate to Avoid Pop.**

The USDA revision lower of this year's U.S. corn production estimates to near the 10-year mean appears optimistic given the extremity of poor planting conditions and likelihood of farmers taking "prevent plant" insurance. The forecast for harvested acres at 82.4 million, still about 1% above last year, should be the initial but likely fleeting support for production yields. In this year's successive reports, production estimates are more likely to be revised lower, supporting the nascent bull market in prices in our view.

**Early Days -- Downward Corn Production Revisions**



Our graphic depicts corn planted acres are more likely to be closer to 2015's 80.6 million. Muddy corn conditions, historic delays and risks of a continuation of less than favorable weather including frost risk should keep the price recovery on track to test resistance near the 2014, high of \$5.19 a bushel.

**Corn Gamma Sellers Benefit Until They Don't.** Gamma sellers in corn are overdue to get stopped out, potentially in a fashion similar to natural gas last year. Sellers of calls on rallies and puts on declines have prospered for five years. The narrowest 24-month Bollinger Bands since 1965 indicate the short-options sellers' party is about as good as it gets. Risks of a sharp move in corn are historically high; up is the path of least resistance. Typically, when markets get this compressed, it indicates complacent positions that take only a small spark to move sharply, the way normal winter cold did for gas in November.

Gamma is the rate of change of delta, which is the underlying position in the market from an option. Short call strategies have been profitable since the price peak in 2012. We believe shorts are at greater risk of getting stopped out than longs.

**Corn Ripe to Move; Tank as Full as It Gets**



**Corn Positions, Prices Making the Turn Higher.** Managed-money net positions and corn prices appear to be in an early bottoming process. Futures show comfort above \$4 a bushel for the first time in five years. Managed-money net positions have recovered from record lows reached in early May, but the 52-week average remains below the neutral threshold, which it hasn't sustained above for more than a few months since 2015. The rapid shift in net positions toward the most net longs in three years should be warranted in a very challenging year for producers.

**Rounding Bottoms -- Corn Prices & Positions**



We expect the rounding-bottom patterns in prices and positions to continue higher.

**Hedge Funds and Corn/Grains**

**Hedge Funds' Big Grains Short Likely to Lead to Opposite in 2H.** The big short in grains from May has been mostly alleviated, but we expect a more-enduring price recovery. Such extremes in futures positions can often form longer-term price bottoms. As a group, hedge-fund positions in grains are about neutral again. Corn leads the major commodities in net-position buying on a three- and 12-month basis.

**Grain Positions: Potential Bull-Market Beginnings.** With hedge funds beginning to lick their wounds from being too short a few months ago, we think there's support for higher grain prices. Since May, when managed-money net positions in corn, soybeans and wheat bottomed from a record net-short level (since 2006) at about 16% of open interest, the Bloomberg Grains Spot Subindex has recovered about 23% from trough to peak. About 3% long, net positions are far from the 10% threshold that has marked virtually every significant price peak in the past five years.

**PERFORMANCE DRIVERS**

**Corn Should Continue to Lead Ag Recovery.** Corn, the world's most significant grain, should continue to lead the agriculture-price recovery, with strong implications for a longer-term sector bottom. On a dollar-value-of-world-production basis, corn is tops. Up about 10% in 2019 (based on front futures) and holding above \$4 a bushel for the longest period in five years, most indications from corn are for further upside when the harvest combines begin to roll. The Bloomberg Corn Subindex Total Return up about half as much as spot prices is reflective of rolling into contango, which is shifting to the positive.

**Net Positions are Far from Typical Price Peaks**



The mirror opposite of extremely short 1H positions should be expected in 2H, notably if our expectation of less Corn Belt production than what's projected pans out. U.S. grain exports to China -- unlikely to decline further -- are also potentially bullish for prices.

**Corn Leading Indicates an Ag Sector Bottom**

Security	%YTD	Chg July	Chg QTD	1Yr %	2Yr %
		Pct	Pct	Chg	Chg
Bloomberg Corn Subindex Total	+1.6%	-5.6%	-5.6%	-3.4%	-14.5%
Bloomberg Sugar Subindex Total	+8%	-3.1%	-3.1%	+8.5%	-26.6%
Bloomberg Grains Spot Subindex	+2%	-5.8%	-5.8%	-3.6%	-1.9%
Bloomberg Soybean Oil Subindex	-1.8%	-1.9%	-1.9%	-7.3%	-25.3%
Bloomberg Grains Subindex Total	-3.7%	-5.7%	-5.7%	-11.5%	-19.7%
Bloomberg Wheat Subindex Total	-3.9%	-7.4%	-7.4%	-16.8%	-18.5%
Bloomberg Agriculture Subindex	-4.0%	-5.1%	-5.1%	-11.5%	-21.8%
Bloomberg Livestock Subindex T	-4.2%	+2.9%	+2.9%	+3.8%	-5.5%
Bloomberg Lean Hogs Subindex T	-4.3%	+4.0%	+4.0%	+7.1%	-12.4%
Bloomberg Live Cattle Subindex	-4.8%	+2.1%	+2.1%	+1.8%	-3.2%
BBG Soybean Meal TR	-5.1%	-5.2%	-5.2%	-14.2%	-12.8%
BBG Softs TR	-5.1%	-5.2%	-5.2%	-11.3%	-28.2%
Bloomberg Soybeans Subindex To	-6.0%	-4.3%	-4.3%	-10.4%	-22.2%
Bloomberg Coffee Subindex Tota	-8.6%	-8.8%	-8.8%	-19.5%	-41.9%
Bloomberg Cotton Subindex Tota	-11.8%	-3.2%	-3.2%	-29.8%	-6.5%
Bloomberg Kansas Wheat Subinde	-17.2%	-8.2%	-8.2%	-32.8%	-34.1%

Near 1% contango at the end of July, the shift toward backwardation in the corn one-year futures curves leads all major commodities. This forward-looking measure of demand vs. supply was about 10% a year ago.

**DATA on BI COMD**  
**Performance - Overview**

**Key Metrics**

Name	MTD % Change	1 Mth % Change	3 Mth % Change	YTD % Change	1 Yr % Change	2 Yr % Change	3 Yr % Change	5 Yr % Change
<b>Commodities</b>								
BCOM Index TR	-0.7	-0.7	-1.4	4.4	-5.4	-2.8	-2.0	-35.3
Energy Index	0.1	0.1	-8.4	10.8	-10.3	10.6	10.4	-60.2
All Metals Index	1.9	1.9	3.5	7.9	3.4	4.0	7.9	-6.7
Industrial Metals Index	1.4	1.4	-2.6	6.2	-5.3	-0.1	18.4	-14.7
Precious Metals Index	2.4	2.4	10.6	9.7	13.2	7.4	-4.1	-1.0
Ags & Livestock Index	-3.9	-3.9	0.9	-4.0	-9.2	-19.4	-21.6	-36.6
Livestock Index	2.9	2.9	-6.3	-4.2	3.8	-5.5	4.9	-26.4
Agriculture Index	-5.1	-5.1	2.6	-4.0	-11.5	-21.8	-26.0	-38.7
Grains Index	-5.7	-5.7	6.4	-3.7	-11.5	-19.7	-21.4	-38.3
Softs Index	-5.2	-5.2	-2.9	-5.1	-11.3	-28.2	-39.9	-47.9
BCOM EX Indices TR								
BCOM Index Roll Select TR	-0.7	-0.7	-1.7	3.1	-7.2	-4.6	-1.3	-31.5
BCOM Index Forwards TR								
BCOM Index ER	-0.9	-0.9	-2.0	2.9	-7.5	-6.4	-6.3	-38.3
BCOM Index Spot	-1.0	-1.0	-1.8	5.5	-4.2	1.6	10.2	-15.3
Energy Index	-0.3	-0.3	-9.8	11.1	-13.6	8.5	25.3	-35.6
All Metals Index								
Industrial Metals Index	1.2	1.2	-3.2	5.1	-6.7	-1.4	18.9	-10.5
Precious Metals Index	2.9	2.9	11.3	10.6	13.9	9.2	-1.2	3.6
Ags & Livestock Index								
Agriculture Index	-5.3	-5.3	4.2	-0.5	-4.6	-8.5	-6.2	-13.1
Grain Index	-5.8	-5.8	8.1	0.2	-3.6	-1.9	6.4	-5.8
Soft Index	-5.4	-5.4	-1.9	-2.4	-4.6	-19.6	-29.4	-27.1
Livestock Index	-0.7	-0.7	-11.4	-4.1	10.5	0.6	5.1	-30.2
Ex Indices								
<b>Stocks</b>								
S&P 500 Index TR	1.4	1.4	1.7	20.2	8.0	25.5	45.7	71.1
<b>Bonds</b>								
Barclays U.S. Aggregate	0.1	0.1	3.1	6.2	7.9	7.1	6.5	16.0
<b>Currencies</b>								
Bloomberg U.S. Dollar Spot Index	1.8	1.8	0.8	1.1	2.9	4.8	2.4	18.3
US Dollar Index	2.6	2.6	1.1	2.5	4.3	6.2	3.2	21.0
US Trade Weighted Broad Dollar	0.8	0.8	0.3	0.3	3.5	7.3	4.9	25.5

**Historical**

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Commodities</b>										
BCOM Index TR	4.5%	-11.2%	1.7%	11.8%	-24.7%	-17.0%	-9.5%	-1.1%	-13.3%	16.8%
Energy Index	9.0%	-12.7%	-4.3%	16.3%	-38.9%	-39.3%	5.2%	-9.4%	-16.0%	-10.5%
All Metals Index	8.2%	-12.6%	20.8%	15.7%	-19.5%	-7.1%	-21.6%	2.9%	-11.5%	25.9%
Industrial Metals Index	6.3%	-19.5%	29.4%	19.9%	-26.9%	-6.9%	-13.6%	0.7%	-24.2%	16.2%
Precious Metals Index	10.1%	-4.6%	10.9%	9.5%	-11.5%	-6.7%	-30.8%	6.3%	4.6%	42.7%
Ags & Livestock Index	-2.5%	-9.4%	-8.1%	0.9%	-16.1%	-6.0%	-12.6%	2.7%	-12.4%	33.9%
Livestock Index	-1.9%	-1.7%	6.4%	-5.6%	-18.8%	11.6%	-3.5%	-3.5%	-2.3%	9.3%
Agriculture Index	-2.6%	-10.8%	-11.0%	2.1%	-15.6%	-9.2%	-14.3%	4.0%	-14.4%	38.5%
Grains Index	-1.5%	-5.5%	-11.3%	-5.9%	-19.4%	-9.4%	-16.9%	18.3%	-14.4%	30.3%
Softs Index	-5.5%	-22.3%	-14.8%	13.2%	-9.9%	-10.1%	-16.9%	-22.4%	-14.0%	59.9%
BCOM EX Indices TR										
BCOM Index Roll Select TR	3.4%	-11.7%	3.6%	14.6%	-23.4%	-15.2%	-9.1%	-0.4%	-8.8%	19.5%
BCOM Index Forwards TR										
BCOM Index ER	3.1%	-13.0%	0.7%	11.4%	-24.7%	-17.0%	-9.6%	-1.1%	-13.4%	16.7%
BCOM Index Spot	5.7%	-10.5%	7.6%	23.1%	-18.4%	-17.0%	-8.7%	3.7%	-8.1%	26.4%
<b>Stocks</b>										
S&P 500 Index TR	21.6%	-4.4%	21.8%	12.0%	1.4%	13.7%	32.4%	16.0%	2.1%	15.1%
<b>Bonds</b>										
Barclays U.S. Aggregate	6.2%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%
<b>Currencies</b>										
Bloomberg U.S. Dollar Spot Index	0.6%	3.1%	-8.5%	2.8%	9.0%	11.0%	3.3%	-0.7%	1.8%	-1.8%
US Dollar Index	2.1%	4.4%	-9.9%	3.6%	9.3%	12.8%	0.3%	-0.5%	1.5%	1.5%
US Trade Weighted Broad Dollar	-0.2%	7.2%	-6.0%	4.5%	10.7%	8.4%	2.8%	-1.4%	0.7%	-1.3%

## Performance – Commodity Total Returns

### Key Metrics

Name	% Change o... Day	WTD % Change	MTD % Change	3 Mth % Change	YTD % Change	11 Yr % Change	2 Yr % Change
<b>▼ BCOM Total Return Indices</b>							
Gold Index	-0.3	0.4	1.0	11.0	11.1	15.9	11.2
Sugar Index	0.5	1.6	-3.1	-2.5	0.8	8.5	-26.6
Lean Hogs Index	-4.0	-10.6	4.0	-10.3	-4.3	7.1	-12.4
Silver Index	-0.9	0.1	7.1	9.6	5.2	4.5	-4.1
Platinum Index	0.7	1.3	4.7	-1.5	9.8	3.8	-7.0
Nickel Index	0.9	2.8	14.4	19.1	35.9	3.5	41.2
Zinc Index	-0.6	0.4	-1.8	-11.4	4.3	1.9	-1.3
Live Cattle Index	-1.3	-2.0	2.1	-3.4	-4.8	1.8	-3.2
Corn Index	-2.7	-3.4	-5.6	9.0	1.6	-3.4	-14.5
Copper Index	-0.5	-0.7	-1.6	-7.7	2.2	-5.4	-9.0
Heating Oil Index	0.9	3.0	1.4	-5.6	18.8	-5.9	23.6
Soybean Oil Index	-2.1	-2.7	-1.9	-0.5	-1.8	-7.3	-25.3
Brent Crude Index	0.6	2.6	0.8	-7.0	25.1	-8.2	37.0
Gasoline Index	0.9	2.2	0.7	-4.7	34.1	-9.4	12.4
Soybeans Index	-1.7	-2.1	-4.3	0.6	-6.0	-10.4	-22.2
WTI Crude Index	0.9	4.3	0.3	-8.6	26.8	-13.9	20.0
Soybean Meal Index	-0.7	-1.4	-5.2	-0.3	-5.1	-14.2	-12.8
Aluminum Index	-0.2	-0.2	-0.4	-0.6	-4.2	-14.7	-6.5
Wheat Index	-2.0	-1.7	-7.4	13.4	-3.9	-16.8	-18.5
Natural Gas Index	4.5	3.9	-1.9	-13.5	-24.3	-19.0	-30.7
Coffee Index	0.2	-0.1	-8.8	4.9	-8.6	-19.5	-41.9
Cotton Index	0.8	-1.1	-3.2	-15.7	-11.8	-29.8	-6.5
HRW Wheat Index	-2.5	-2.1	-8.2	5.0	-17.2	-32.8	-34.1

### Historical

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>▼ BCOM Total Return Indices</b>										
Nickel Index	34.7%	-16.4%	25.6%	11.8%	-42.6%	7.3%	-20.1%	-10.2%	-24.7%	32.2%
Gasoline Index	32.9%	-28.3%	2.8%	6.4%	-12.6%	-43.8%	1.9%	25.7%	14.5%	13.1%
WTI Crude Index	25.7%	-20.5%	5.1%	7.1%	-44.3%	-41.7%	6.8%	-11.8%	-3.6%	3.8%
Brent Crude Index	24.4%	-14.9%	14.2%	25.4%	-45.6%	-47.6%	7.2%	7.6%	16.8%	11.5%
Heating Oil Index	17.7%	-15.7%	15.0%	33.5%	-42.8%	-38.8%	0.4%	5.5%	10.7%	8.3%
Gold Index	11.4%	-2.8%	12.8%	7.7%	-10.9%	-1.7%	-28.7%	6.1%	9.6%	28.7%
Platinum Index	9.0%	-14.8%	3.0%	0.8%	-26.5%	-12.3%	-11.8%	8.7%	-21.8%	19.3%
Silver Index	6.2%	-10.2%	5.8%	14.0%	-12.7%	-20.4%	-36.6%	7.1%	-10.1%	81.8%
Zinc Index	4.9%	-21.4%	29.7%	57.5%	-28.0%	3.5%	-7.0%	9.0%	-27.8%	-8.8%
Corn Index	4.4%	-4.6%	-12.1%	-9.8%	-19.2%	-13.3%	-30.3%	19.0%	1.1%	30.7%
Copper Index	2.7%	-21.2%	29.2%	15.7%	-25.1%	-16.6%	-8.8%	5.0%	-24.4%	29.5%
Soybean Oil Index	0.3%	-19.2%	-7.0%	7.3%	-7.7%	-20.6%	-22.4%	-9.8%	-15.2%	33.8%
Sugar Index	0.3%	-26.1%	-25.4%	22.8%	-4.7%	-30.9%	-20.0%	-13.0%	-11.9%	24.0%
Lean Hogs Index	-0.3%	-11.0%	2.8%	-2.9%	-26.1%	-4.4%	-2.0%	-2.9%	-4.6%	0.3%
Wheat Index	-1.9%	3.5%	-12.5%	-24.1%	-22.2%	-9.4%	-27.2%	9.8%	-34.0%	21.2%
Live Cattle Index	-3.6%	2.6%	9.1%	-7.4%	-14.3%	22.1%	-5.0%	-3.9%	-1.0%	15.0%
Aluminum Index	-4.0%	-16.9%	31.2%	9.7%	-22.9%	-3.1%	-20.7%	-4.0%	-21.7%	5.4%
Soybean Meal Index	-4.4%	-4.4%	-4.8%	18.1%	-18.0%	11.8%	20.0%	49.1%	-18.1%	38.9%
Soybeans Index	-4.4%	-11.7%	-8.1%	14.8%	-14.6%	-5.5%	10.5%	24.0%	-16.4%	34.9%
Coffee Index	-8.8%	-26.5%	-16.0%	-1.3%	-31.5%	37.8%	-30.5%	-41.6%	-11.2%	67.0%
Cotton Index	-12.5%	-7.3%	12.5%	10.5%	3.0%	-21.2%	9.0%	-12.7%	-21.7%	98.2%
HRW Wheat Index	-15.0%	-3.1%	-14.9%	-25.3%	-32.7%	-4.7%	-26.2%	5.6%	-22.9%	42.1%
Natural Gas Index	-27.6%	-0.1%	-36.4%	10.3%	-39.9%	-30.7%	5.0%	-30.6%	-47.1%	-40.6%

Performance – Prices

Key Metrics

Name	1Y	MTD % Change	3 Mth % Change	YTD % Change	1Y Yr % Change	2Y Yr % Change
<b>▼ BCOM Single Commodity Price</b>						
Palladium	1	-0.9	9.5	21.2	61.6	70.6
Lean Hogs	--	10.0	-5.9	30.1	29.8	-1.2
Sugar	(1	-0.9	1.8	1.5	15.7	-18.1
Gold	--	0.2	10.1	10.5	15.5	11.6
Corn	--	-4.8	13.3	6.7	7.5	8.0
Silver	--	6.3	8.9	5.1	4.6	-3.2
Platinum	(1	4.9	-1.4	10.1	4.2	-6.6
Nickel	(2	14.6	19.2	36.3	3.8	42.3
Live Cattle	--	-3.3	-13.6	-14.3	-0.7	-4.6
Soybean Oil	--	-1.7	0.6	0.7	-3.4	-20.1
Soybeans	--	-4.0	2.7	-2.1	-4.4	-13.1
Copper (CME)	--	-1.9	-8.5	1.0	-5.9	-8.1
Copper (LME)	--	-1.3	-7.7	-0.7	-5.9	-6.7
Zinc	-0	-3.9	-16.1	-1.5	-7.2	-12.2
Heating Oil	(2	0.5	-6.1	16.3	-8.3	18.3
Gas Oil	(2	0.3	-6.4	16.9	-8.8	22.1
Coffee	(-	-7.9	8.5	-2.2	-9.3	-28.4
Gasoline	(1	-2.1	-10.4	43.7	-10.7	11.5
Wheat	--	-7.7	16.4	-3.2	-12.0	2.7
Brent Crude	(2	-2.1	-10.5	21.1	-12.2	23.8
Soybean Meal	--	-4.8	0.7	-2.6	-12.6	-6.4
Aluminum	--	0.0	0.5	-2.2	-13.8	-6.2
WTI Crude	-2	-1.1	-9.5	27.4	-15.9	15.3
Natural Gas	43	-3.2	-13.2	-24.0	-19.7	-20.0
HRW Wheat	(-	-6.4	9.4	-13.5	-24.0	-11.0
Cotton	(-	0.1	-16.8	-12.4	-30.0	-10.3

Historical

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>▼ BCOM Single Commodity Price</b>										
Gasoline	44.0%	-26.4%	8.1%	31.4%	-11.7%	-48.5%	-0.9%	4.7%	9.5%	19.5%
Lean Hogs	35.4%	-15.0%	8.5%	10.6%	-26.4%	-4.9%	-0.3%	1.7%	5.7%	22.3%
Nickel	35.1%	-16.5%	27.5%	13.5%	-41.8%	9.0%	-18.6%	-9.2%	-24.2%	33.8%
WTI Crude	28.8%	-24.8%	12.5%	45.0%	-30.5%	-45.9%	7.2%	-7.1%	8.2%	15.1%
Palladium	28.0%	12.8%	55.3%	21.6%	-29.6%	11.2%	2.1%	7.2%	-18.3%	96.5%
Gas Oil	18.1%	-14.9%	19.8%	53.6%	-36.3%	-45.8%	1.9%	0.3%	21.2%	20.0%
Brent Crude	18.0%	-19.5%	17.7%	52.4%	-35.0%	-48.3%	-0.3%	3.5%	13.3%	21.6%
Heating Oil	16.7%	-19.0%	21.8%	54.8%	-40.4%	-40.0%	1.1%	3.8%	15.4%	20.1%
Gold	11.4%	-2.1%	13.7%	8.6%	-10.5%	-1.5%	-28.3%	7.0%	10.2%	29.7%
Platinum	10.4%	-14.8%	3.6%	1.1%	-26.2%	-11.8%	-10.9%	9.9%	-21.1%	21.5%
Corn	8.5%	6.9%	-0.4%	-1.9%	-9.6%	-5.9%	-39.6%	8.0%	2.8%	51.7%
Silver	5.8%	-9.4%	7.2%	15.8%	-11.5%	-19.5%	-35.9%	8.3%	-9.8%	83.7%
Soybean Oil	1.5%	-16.7%	-3.9%	12.7%	-4.4%	-17.6%	-21.0%	-5.6%	-9.8%	43.1%
Copper (CME)	1.4%	-20.3%	31.7%	17.4%	-24.4%	-16.8%	-7.0%	6.3%	-22.7%	32.9%
Sugar	0.5%	-20.6%	-22.3%	28.0%	5.0%	-11.5%	-15.9%	-16.3%	-27.5%	19.2%
Copper (LME)	-0.4%	-17.4%	30.6%	17.3%	-25.8%	-13.9%	-6.8%	4.2%	-21.2%	31.2%
Zinc	-0.8%	-25.6%	30.1%	60.2%	-26.2%	6.0%	-0.5%	12.2%	-25.2%	-3.5%
Soybeans	-1.0%	-7.3%	-4.5%	14.4%	-14.5%	-22.3%	-7.5%	18.4%	-14.0%	34.0%
Aluminum	-2.0%	-19.3%	33.3%	12.5%	-17.9%	4.1%	-13.9%	2.5%	-18.8%	11.6%
Wheat	-2.4%	17.9%	4.7%	-13.2%	-20.3%	-2.6%	-22.2%	19.2%	-17.8%	46.7%
Soybean Meal	-2.4%	-2.0%	-0.1%	18.4%	-27.5%	-16.7%	4.1%	35.9%	-16.4%	18.0%
Coffee	-3.2%	-19.3%	-7.9%	8.2%	-23.9%	50.5%	-23.0%	-36.6%	-5.7%	76.9%
Cotton	-12.6%	-8.2%	11.3%	11.6%	5.0%	-28.8%	12.6%	-18.1%	-36.6%	91.5%
Live Cattle	-12.9%	1.9%	4.7%	-15.2%	-16.4%	21.5%	1.8%	8.9%	12.1%	25.9%
HRW Wheat	-13.4%	14.4%	2.1%	-10.7%	-25.2%	-2.2%	-22.9%	15.9%	-15.7%	58.7%
Natural Gas	-24.3%	-0.4%	-20.7%	59.3%	-19.1%	-31.7%	26.2%	12.1%	-32.1%	-20.9%

Performance - Volatility

Key Metrics

Name	Current	% Change o... Day	% Change WTD	% Change MTD	1 Mth % Change	3 Mth % Change	YTD % Change	1 Yr % Change	2 Yr % Change	3 Yr % Change	5 Yr % Change
▼ BCOM 3M Implied Volatility											
Gold	9.8	-17.4	-13.5	-27.6	-27.6	16.9	-20.9	1.7	-12.7	-36.0	-27.8
Aluminum	14.6	-12.4	-6.9	-20.0	-20.0	-13.2	-23.9	-25.8	-1.8	-17.2	-27.3
Soybean Oil	15.6	-2.9	-5.4	-9.6	-9.6	2.6	8.8	-3.5	-25.2	-21.7	-12.8
Copper (COMEX)	15.8	-1.5	0.0	-13.5	-13.5	3.5	-12.1	-24.2	4.0	-19.9	26.5
Copper (LME)	15.9	1.8	12.4	-8.7	-8.7	-2.9	-19.8	-18.9	0.0	25.3	17.3
Soybean Meal	15.9	-2.3	-2.2	-17.6	-17.6	-0.9	9.1	-23.6	-26.6	-44.1	-33.9
Soybeans	16.1	3.6	-3.4	-12.1	-12.1	-0.9	18.7	-23.5	-15.5	-35.8	-27.5
Live Cattle	16.6	5.0	3.8	-8.0	-8.0	11.3	29.2	-3.4	-21.5	-20.1	31.0
Silver	17.5	-7.3	-3.8	1.9	1.9	23.2	-10.8	7.6	-9.8	-37.9	-9.3
Cotton	19.0	-0.7	0.8	-11.4	-11.4	7.5	-3.9	-19.6	-1.2	-21.6	-13.4
Platinum	19.5	1.5	5.0	4.6	4.6	17.0	13.0	22.0	31.0	-0.5	44.1
Sugar	20.2	1.9	-1.5	-10.6	-10.6	-7.9	-6.3	-20.5	-17.3	-34.9	17.7
Zinc	21.9	-4.3	-7.4	-6.5	-6.5	-1.0	-9.9	-10.7	0.1	0.0	9.8
Wheat	24.1	-1.1	-4.0	-3.8	-3.8	-2.3	27.3	-19.3	6.5	-0.8	5.4
Heating Oil	24.1	2.7	-7.3	-15.7	-15.7	3.3	-33.3	3.2	2.8	-32.4	70.9
Corn	25.9	-1.6	-2.8	-11.1	-11.1	10.1	65.8	22.1	23.3	7.6	14.2
HRW Wheat	26.0	-1.1	-3.7	-2.7	-2.7	3.9	31.6	-15.8	15.3	10.9	17.7
Gas Oil	26.3	-5.2	-2.2	-7.1	-7.1	15.7	-39.1	12.0	9.2	-28.3	107.2
Brent Crude	27.2	3.8	-9.5	-14.6	-14.6	-2.0	-36.4	4.0	-5.9	-35.0	71.2
Coffee	28.2	-2.5	0.3	-13.1	-13.1	-1.1	10.2	34.4	1.3	-13.3	-33.5
Unlead Gas	28.7	-8.7	-16.2	-18.1	-18.1	9.0	-24.7	12.0	5.5	-33.1	87.7
Nickel	29.5	68.9	-4.6	13.4	13.4	28.6	-1.6	8.3	10.7	17.0	-0.4
Crude Oil	30.3	9.9	0.1	-4.7	-4.7	18.7	-37.4	23.6	3.6	-25.2	83.2
Palladium	30.7	2.4	1.3	0.4	0.4	12.3	17.4	38.3	36.7	14.8	74.2
NaturalGas	36.9	1.4	3.1	9.7	9.7	59.5	8.8	69.3	21.4	-3.8	28.0
Lean Hogs	44.2	5.6	9.4	6.7	6.7	7.2	55.8	9.7	54.8	33.2	120.1
▼ BCOM 60 Day Historical Volatility											
Gold	12.5	0.3	0.2	5.3	5.3	23.0	10.1	37.5	19.5	-24.8	-0.1
Copper (LME)	13.4	-0.2	-0.2	-9.7	-9.7	-2.5	-21.3	-24.8	-1.7	-31.7	6.3
Copper (CME)	14.6	-2.0	-1.8	-11.6	-11.6	-7.6	-29.9	-26.1	-5.1	-27.3	10.5
Aluminum	15.2	-1.2	-3.0	2.0	2.0	2.6	1.3	-22.0	29.6	-11.0	-9.2
Silver	16.6	1.0	-2.7	1.2	1.2	9.2	-9.7	-4.4	-10.9	-27.2	-8.3
Soybean Oil	18.4	3.0	2.2	6.9	6.9	34.3	18.5	17.1	5.7	-17.8	5.4
Platinum	19.2	-0.1	-2.1	2.6	2.6	-8.4	7.0	-11.1	-1.6	-15.1	35.6
Zinc	20.2	-1.0	-4.3	-16.7	-16.7	-16.7	-22.5	-16.5	5.2	-14.4	25.1
Soybean Meal	20.9	-0.5	0.2	-0.2	-0.2	44.5	24.8	17.3	-2.9	-40.2	-34.0
Soybeans	20.9	1.7	0.8	7.2	7.2	72.8	16.8	-8.6	6.5	-35.7	-20.9
Sugar	23.2	0.0	-1.6	-12.8	-12.8	-8.7	-1.6	-15.4	-34.2	-27.0	-8.1
Palladium	25.3	0.1	1.8	-12.9	-12.9	-32.0	-6.2	7.5	25.3	-7.4	55.6
Nickel Gas	26.3	-0.3	-0.2	32.6	32.6	30.7	31.3	13.7	20.0	-20.8	-20.5
Gas Oil	26.4	0.6	0.6	3.8	3.8	39.3	-17.0	21.7	3.3	-21.4	137.6
Heating Oil	26.5	-0.5	0.7	9.8	9.8	63.4	-14.6	4.1	6.0	-29.0	128.8
Cotton	28.7	0.2	-1.3	14.2	14.2	45.4	23.6	6.0	-14.1	18.5	0.1
Corn	32.2	1.9	1.3	14.6	14.6	86.2	128.7	25.9	26.4	-5.1	56.1
Unlead Gas	32.4	-1.2	-0.8	0.8	0.8	17.5	-25.1	19.4	20.6	-10.5	141.0
Brent Crude	32.5	0.1	0.0	9.9	9.9	74.5	-26.4	13.2	13.4	-13.3	166.0
Natural Gas	35.1	4.1	3.8	18.0	18.0	27.1	-61.0	63.3	4.4	-25.5	20.4
Crude Oil	35.3	-0.1	1.0	8.1	8.1	62.5	-22.7	17.7	19.5	-5.0	153.6
Wheat	36.2	0.9	1.1	14.0	14.0	37.0	56.6	-2.8	12.1	30.6	33.4
Live Cattle	36.9	1.2	1.4	8.9	8.9	40.3	44.9	-3.0	15.3	59.9	146.1
HRW Wheat	36.9	1.2	1.4	8.9	8.9	40.3	44.9	-3.0	15.3	40.2	55.3
Coffee	38.0	-1.1	-0.7	4.0	4.0	43.5	0.7	47.9	27.5	18.0	-15.8
Lean Hogs	42.7	1.6	1.4	-1.3	-1.3	-10.4	-29.0	-13.9	16.4	54.9	66.4

### Curve Analysis – Contango (-) | Backwardation (+)

#### Key Metrics

Name	Current Position	1 Yr Ago	1 Yr Change	YTD Change	MTD Change	1 Mth Change	3 Mth Change	2 Yr Change
<b>1 Year Spread % of First Contract</b>								
BCOM	-4.2	-3.6	-0.6	0.8	0.4	0.4	0.4	-1.2
Sector								
Energy	-0.6	4.3	-4.9	1.6	0.5	-0.6	-2.0	1.7
Industrial Metals	-1.8	-1.5	-0.3	-0.6	-0.4	-0.4	-1.1	-0.1
Precious Metals	-2.4	-2.8	0.4	0.7	-0.1	-0.1	0.6	-0.4
Livestock	-6.0	-9.9	3.9	-4.3	7.2	7.2	-0.1	-9.7
Agriculture	-8.9	-6.6	-2.3	0.0	-0.6	-0.6	1.3	-2.2
Single Commodities								
Unleaded Gas	6.8	3.6	3.3	10.0	0.0	0.0	0.2	3.8
Brent Crude	5.5	2.5	3.1	8.7	1.3	1.3	-1.1	7.1
Crude Oil	4.6	6.7	-2.1	11.6	-0.1	-0.1	-0.2	5.2
Gas Oil	2.8	-0.2	2.9	6.8	2.1	2.1	2.5	1.3
Heating Oil	2.4	-0.3	2.7	5.8	1.3	1.3	2.3	1.1
Palladium	1.0	1.0	0.1	-3.1	-0.4	-0.4	-0.4	-1.1
Zinc	0.5	1.7	-1.2	-2.9	-2.3	-2.3	-6.5	0.2
Copper (LME)	-0.9	-1.3	0.4	-0.9	-0.3	-0.3	-0.3	0.6
Nickel	-1.6	-2.2	0.6	1.5	0.6	0.6	0.9	0.5
Platinum	-1.7	-1.7	0.0	0.3	0.2	0.2	0.1	-0.3
Copper (CME)	-1.8	-3.0	1.2	-1.0	-0.4	-0.4	-0.3	0.5
Gold	-2.3	-2.7	0.5	0.7	-0.3	-0.3	0.5	-0.6
Silver	-2.6	-2.9	0.3	0.7	0.1	0.1	0.8	-0.2
Cotton	-3.2	7.5	-10.7	-0.4	4.4	4.4	-3.1	-6.8
Corn	-3.9	-9.1	5.3	4.7	2.3	2.3	10.6	6.7
Live Cattle	-4.2	-3.7	-0.5	-9.4	0.3	0.3	1.3	-7.0
Aluminum	-5.0	-2.6	-2.5	0.3	0.4	0.4	0.7	-2.3
Soybean Oil	-6.4	-6.6	0.2	-0.2	-0.5	-0.5	0.6	-4.1
Wheat	-7.0	-8.2	1.2	3.0	-3.5	-3.5	8.3	9.4
Soybean Meal	-7.1	1.9	-9.0	-1.8	-1.4	-1.4	-2.8	-3.7
Lean Hogs	-7.8	-16.2	8.4	0.8	14.1	14.1	-1.6	-12.3
Soybean	-8.3	-5.7	-2.6	-1.1	-2.1	-2.1	-1.0	-5.0
Natural Gas	-8.8	5.1	-13.9	-6.8	-1.1	-1.1	-9.2	-8.3
Sugar	-12.0	-15.3	3.2	-2.7	-2.8	-2.8	0.3	-4.9
Coffee	-14.0	-12.6	-1.5	2.0	-2.7	-2.7	-0.1	-4.4
HRW Wheat	-15.2	-10.4	-4.8	-1.7	0.0	0.0	5.6	3.1
Thermal Coal	-17.5	12.8	-30.4	-25.1	0.0	-7.5	-8.8	

Measured via the one-year futures spread as a percent of the first contract price. Negative means the one-year out future is higher (contango). Positive means the one-year out future is lower (backwardation).

#### Historical

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>1 Year Spread % of First Contract</b>										
BCOM	-4.3	-5.0	-1.7	-2.2	-7.1	-4.4	0.3	-0.9	-2.0	2.3
Sector										
Energy	-1.2	-2.2	4.3	0.4	-14.0	-11.3	3.5	-1.3	-2.5	-2.1
Industrial Metals	-1.8	-1.2	-0.8	-0.8	-1.5	-0.8	-1.8	-2.5	-2.1	0.5
Precious Metals	-2.4	-3.1	-2.3	-1.7	-1.0	-0.8	-0.7	-0.7	-0.7	-0.9
Livestock	-5.7	-1.7	6.5	8.1	0.6	8.3	4.1	-0.7	-0.2	-1.8
Agriculture	-8.6	-8.9	-5.9	-4.2	-5.5	-5.6	-1.5	-2.3	-1.8	12.2
Single Commodities										
Unleaded Gas	7.2	-3.2	4.7	2.8	1.0	-12.3	7.0	9.8	7.9	3.7
Brent Crude	5.1	-3.1	6.3	-3.1	-22.1	-16.4	4.9	6.3	4.0	-0.4
Crude Oil	4.3	-7.1	5.0	-5.9	-20.4	-13.5	7.3	-1.3	1.4	-3.2
Gas Oil	2.3	-4.0	6.2	-4.8	-23.8	-12.0	3.1	2.9	3.0	-4.2
Heating Oil	1.8	-3.4	5.9	-4.5	-24.5	-4.5	3.2	2.1	2.1	-3.4
Palladium	1.1	4.1	1.5	-0.5	-0.2	-0.1	-0.5	-0.2	-0.4	0.0
Zinc	0.4	3.4	3.4	0.2	-2.8	-1.4	-2.3	-4.5	-3.9	-1.7
Copper (LME)	-0.8	0.0	-1.3	-0.3	0.3	1.6	1.1	-0.7	-0.3	2.7
Nickel	-1.7	-3.1	-2.0	-1.9	-1.4	-1.1	-1.8	-1.4	-0.1	1.1
Copper (CME)	-1.7	-0.8	-1.8	-0.8	-1.1	-0.2	1.3	-1.1	-0.8	2.5
Platinum	-1.7	-2.0	-1.4	-1.1	-0.4	-0.4	-0.5	-0.7	-1.0	-0.5
Gold	-2.3	-2.9	-2.2	-1.5	-0.5	-0.3	-0.4	-0.7	-0.9	-0.9
Corn	-2.3	-8.5	-12.1	-10.5	-9.5	-8.1	-9.2	12.7	7.2	9.4
Silver	-2.6	-3.3	-2.5	-2.0	-1.4	-1.2	-0.9	-0.7	-0.5	-0.9
Cotton	-3.5	-2.9	6.1	1.7	-2.7	-8.6	6.7	-5.7	3.6	34.6
Live Cattle	-3.9	5.2	6.3	13.3	8.1	7.0	2.5	-3.3	-4.5	-3.8
Aluminum	-5.1	-5.3	-2.3	-1.0	-2.7	-3.1	-7.5	-5.0	-5.2	-2.3
Wheat	-5.9	-10.0	-15.5	-17.1	-10.5	-5.0	-7.2	-6.9	-12.4	-8.7
Soybean Oil	-6.4	-6.2	-1.1	-1.2	-3.1	-0.9	-3.8	-2.8	-1.6	-0.9
Soybean Meal	-6.9	-5.3	-3.4	-0.4	-5.7	9.8	19.9	12.5	-2.4	9.9
Lean Hogs	-7.4	-8.6	6.7	2.9	-7.0	9.6	5.7	2.0	4.2	0.2
Soybean	-7.8	-7.2	-3.3	0.4	-2.0	0.9	13.1	7.7	-1.2	5.9
Sugar	-12.0	-9.3	-3.5	4.8	0.9	-13.1	-8.2	-5.5	-0.3	26.0
Natural Gas	-12.3	-2.0	-3.7	-0.1	-22.6	-22.2	-3.2	-20.7	-29.9	-18.4
Coffee	-14.0	-16.0	-10.9	-9.2	-8.4	-7.4	-11.2	-11.5	-4.9	6.1
HRW Wheat	-14.5	-13.5	-19.1	-16.1	-14.9	-6.3	-5.5	-5.7	-7.9	-3.1
Thermal Coal	-16.7	7.5	5.4	18.4	14.0	1.7	1.9	-8.3	-6.2	11.2

## Curve Analysis – Gross Roll Yield

### Key Metrics

Name	Current 1Yr Yld	Yld 6 Months Ago	Yld 1 Yr Ago	Change from 1 Yr Ago	Yld 2 Yr Ago	Change from 2 Yr Ago
<b>▼ 1 Year Gross Yield</b>						
<b>▼ Sector Roll Yield</b>						
BCOM Energy	4.8	4.0	-1.0	5.8	-12.4	17.2
BCOM Industrial Metals	3.9	0.2	0.1	3.8	-1.7	5.6
BCOM Precious Metals	-0.7	-0.7	-1.0	0.3	-1.5	0.8
BCOM	-1.2	-0.9	-3.3	2.1	-7.9	6.7
BCOM Livestock	-6.7	1.6	0.1	-6.8	4.0	-10.7
BCOM Softs	-6.7	-5.3	-3.3	-3.4	-4.1	-2.6
BCOM Grains	-8.0	-9.8	-11.4	3.4	-7.8	-0.2
BCOM Agriculture		-7.4	-7.7			
<b>▼ Commodities Roll Yield</b>						
Zinc	11.9	4.8	2.8	9.1	-2.8	14.7
Brent Crude	6.3	3.1	10.9	-4.6	-12.5	18.8
Gas Oil	4.1	2.7	9.6	-5.4	-11.1	15.2
Nickel	3.1	-2.6	-1.6	4.7	-2.3	5.4
Heating Oil	3.0	2.7	3.5	-0.6	-12.5	15.5
Crude Oil	2.4	4.0	2.9	-0.6	-15.1	17.5
Unlead Gas	2.2	-1.1	0.2	2.0	-9.7	12.0
Platinum	1.2	0.0	0.2	1.0	-0.7	1.9
Cotton	1.2	-0.3	4.3	-3.1	-2.3	3.5
Natural Gas	0.7	0.8	-13.6	14.3	-23.2	23.9
Copper (CME)	0.6	-0.9	-1.1	1.7	-2.4	3.0
Gold	0.5	-0.6	-0.7	1.2	-1.1	1.6
Aluminum	0.4	2.5	1.4	-1.0	-1.0	1.4
Silver	-0.1	-0.7	-0.8	0.7	-1.5	1.5
Soybean Meal	-1.6	-2.0	-5.5	3.9	-2.2	0.6
Soybean Oil	-2.8	-2.7	-0.2	-2.6	-2.6	-0.1
Soybean	-4.2	-3.7	-0.9	-3.3	4.3	-8.5
Wheat	-5.5	-13.6	-15.9	10.5	-18.2	12.8
Sugar	-6.5	-7.5	-3.0	-3.5	-1.9	-4.6
Coffee	-8.8	-7.4	-5.9	-2.9	-6.7	-2.1
Corn	-9.0	-11.2	-9.9	0.9	-8.8	-0.2
HRW Wheat	-9.6	-16.2	-17.2	7.6	-20.0	10.3
Lean Hogs	-22.8	8.2	7.7	-30.5	-11.1	-11.7

### Historical

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>▼ 1 Year Gross Yield</b>										
<b>▼ Sector Roll Yield</b>										
BCOM Energy	4.5	3.6	-7.7	-32.5	-12.6	1.6	-5.1	-11.7	-11.0	-13.8
BCOM Industrial Metals	0.4	0.7	-3.0	-2.0	-1.8	-2.1	-3.9	-3.3	-2.2	-4.1
BCOM Precious Metals	-0.7	-0.7	-0.2	-1.1	-0.6	-0.4	-0.5	-0.9	-0.6	-1.1
BCOM	-1.2	-0.7	-5.9	-11.4	-6.3	0.0	-0.9	-4.7	-6.6	-9.5
BCOM Softs	-6.6	-4.5	-4.2	-5.6	-7.4	-12.5	-4.9	0.9	9.0	0.5
BCOM Livestock	-6.9	1.8	0.5	0.2	1.1	-0.2	-4.5	-9.8	-12.3	-14.8
BCOM Agriculture	-7.3	-7.1	-8.0	-6.1	-4.1	-1.0	4.9	1.9	-1.9	-9.6
BCOM Grains	-8.1	-10.1	-10.7	-7.0	-4.7	0.7	8.2	3.6	-5.8	-12.6
<b>▼ Commodities Roll Yield</b>										
Zinc	6.5	4.2	-3.1	-2.7	-2.5	-4.6	-8.8	-3.1	-3.0	-5.3
Brent Crude	4.9	4.7	-4.9	-27.7	-23.3	0.3	6.9	4.2	8.3	-12.5
Live Cattle	3.9	0.6	4.4	7.8	2.0	0.6	-6.8	-12.8	-12.5	-12.2
Gas Oil	2.8	3.9	-0.9	-22.7	-11.0	-1.6	2.1	7.4	2.1	-12.3
Heating Oil	1.8	3.4	-6.4	-25.3	-3.0	1.1	-1.3	1.0	-2.9	-11.7
Crude Oil	0.6	4.4	-7.3	-38.2	-14.0	4.3	-0.3	-4.5	-9.7	-11.3
Natural Gas	0.6	0.3	-14.0	-52.6	-19.8	0.8	-22.3	-42.7	-13.8	-16.1
Unlead Gas	0.5	-0.6	-4.0	-27.2	1.1	4.7	1.3	18.9	4.5	-6.9
Copper (CME)	0.4	-1.0	-3.5	-1.6	-0.7	0.3	-1.7	-1.3	-0.1	-3.6
Cotton	-0.2	0.9	1.0	-1.1	-2.1	7.7	-3.6	5.2	15.5	14.3
Aluminum	-0.4	2.4	-3.2	-2.9	-6.0	-9.1	-8.4	-6.2	-3.3	-6.0
Platinum	-0.7	0.0	-1.1	-0.4	-0.2	-0.5	-0.8	-1.2	0.9	-2.7
Gold	-0.7	-0.7	-0.3	-0.9	-0.4	-0.2	-0.4	-0.9	2.9	-1.0
Silver	-1.2	-0.8	0.1	-1.8	-1.2	-0.9	-0.7	-1.1	4.5	-5.1
Soybean Meal	-1.5	-2.3	-4.8	-0.5	9.6	28.7	16.5	13.0	-1.3	20.7
Nickel	-1.6	0.1	-0.6	-1.7	0.5	-2.9	-2.3	-1.0	-1.7	-1.6
Sugar	-4.3	-5.4	-3.2	-5.2	-9.9	-19.5	-4.1	3.1	18.7	4.6
Soybean Oil	-5.3	-2.5	-2.9	-5.4	-3.2	-2.9	-1.3	-4.2	-4.2	-8.5
Wheat	-6.1	-14.3	-18.0	-10.9	-1.9	-7.0	-5.1	-9.4	-14.6	-23.8
Coffee	-9.0	-7.2	-9.2	-9.7	-7.8	-12.6	-7.2	-5.0	-3.4	-8.5
Soybean	-9.2	-4.4	-3.0	0.2	-0.2	17.0	18.5	5.5	-1.8	0.5
HRW Wheat	-10.2	-17.5	-17.8	-14.7	-7.6	-2.5	-3.3	-4.1	-7.6	-9.9
Corn	-12.7	-11.5	-12.4	-7.9	-9.6	-7.4	9.4	10.8	0.4	-20.9
Lean Hogs	-18.4	4.1	-8.2	-13.6	0.3	0.6	-1.7	-4.5	-9.6	-23.8

Curve Analysis – Forwards / Forecasts

Spread %

Name	7/2019	6/2019	5/2019	4/2019	3/2019	2/2019	1/2019	12/2018	11/2018	10/2018	9/2018
▼ 1 Yr Spread ((Forward-Forecast)/ Forecast											
▼ Energy											
WTI Crude Spread %	-2.6	-2.0	-5.0	1.8	-1.9	-3.3	-8.9	-2.8	-3.1	-0.9	2.4
Brent Crude Spread %	-3.7	-2.0	-4.9	0.6	-2.5	-1.6	-8.0	-1.1	-1.8	1.3	4.1
ULS Diesel Spread %	-7.7	-10.9	-11.7	-5.2	-4.3	-12.6	-1.5	-0.8	1.7	2.2	
Unleaded Gasoline Spread %	-6.1	-6.9	-9.2	-5.7	-2.5	-5.5	-17.4	-2.0	-1.8	-1.4	2.8
▼ Soft											
Sugar Spread %	-4.0	-1.5	-4.9	-3.2	-0.1	4.8	2.9	-3.0	-1.2	3.3	-3.6
Coffee Spread %	-5.3	1.7	0.2	-13.8	-11.0	-15.1	-10.3	-9.2	-5.8	-4.8	-6.8
Cotton Spread %	-9.5	-7.4	-7.6	-1.9	-2.3	-5.7	-2.5	-1.2	-1.7	-2.8	-2.5
▼ Industrial Metals											
Copper Spread % (LME)	-2.9	-3.4	-5.1	-0.6	-2.5	-0.9	-6.0	-0.8	-1.1	-1.9	-1.7
Aluminum Spread %	-1.6	-3.2	-7.0	-6.4	-5.6	-4.8	-4.8	-0.8	-1.5	-1.5	-1.0
Zinc Spread %	-1.5	-2.8	-4.0	0.2	2.0	0.0	-2.2	-2.2	-2.5	-2.9	-4.9
Nickel Spread %	6.5	-0.4	-3.7	-3.8	-0.3	1.8	-1.7	-3.9	-3.8	-3.4	-3.1
▼ Precious Metals											
Gold Spread %	2.9	3.5	-1.9	-1.5	0.9	3.7	3.8	0.0	-0.5	-0.3	-1.7
Silver Spread %	2.7	-1.9	-6.5	-5.2	-4.7	-1.2	1.6	-1.2	-1.8	-2.4	-4.3
▼ Grain											
Corn Spread %	2.2	6.1	9.2	-3.5	-1.1	-2.3	1.1	-1.2	-2.3	-3.2	-3.4
Soybeans Spread %	-3.0	-3.1	-3.5	-5.3	-3.6	-3.3	-1.8	-2.7	-2.6	-3.4	-3.3
Wheat Spread %	-2.2	3.8	4.6	-8.6	-5.3	-5.1	4.3	-0.7	-2.3	-2.5	-1.4

Data Set

Name	7/2019	6/2019	5/2019	4/2019	3/2019	2/2019	1/2019	12/2018	11/2018	10/2018	9/2018	8/2018
▼ Data Set												
▼ 1 Yr Spread												
▼ Energy												
Natural Gas Forward	2.47	2.55	2.70	2.74	2.87	2.92	2.94	3.15	3.24	3.00	2.98	2.93
WTI Crude Forward	58.7	59.3	57.7	62.0	59.1	58.0	55.1	64.4	64.9	67.4	68.6	67.8
WTI Crude Forecast	60.3	60.5	60.8	60.9	60.3	60.0	60.5	66.3	67.0	68.0	67.0	67.0
Brent Crude Forward	65.2	65.8	65.1	68.9	65.9	65.8	61.5	71.7	72.4	75.0	76.2	75.1
Brent Crude Forecast	67.7	67.1	68.5	68.5	67.6	66.9	66.9	72.5	73.7	74.0	73.2	72.3
ULS Diesel Forward	195.78	196.56	194.87	204.70	198.83	202.30	191.11	209.40	210.72	217.57	218.90	216.65
ULS Diesel Forecast	212.00	220.63	220.59	216.00	211.50	218.71	212.50	212.50	214.03	214.20	214.20	214.20
Unleaded Gasoline Forward	176.01	176.85	173.01	183.01	171.69	166.66	154.12	192.81	193.71	200.14	206.06	203.36
Unleaded Gasoline Forecast	187.50	190.00	190.48	194.02	176.17	176.42	186.54	196.71	197.21	203.00	200.50	203.55
▼ Soft												
Sugar Forward	12.49	12.81	12.41	12.70	12.99	13.49	13.15	11.83	11.95	12.06	11.37	11.61
Sugar Forecast	13.00	13.00	13.05	13.13	13.00	12.88	12.78	12.20	12.10	11.68	11.80	11.85
Coffee Forward	98.48	101.65	100.16	94.77	97.93	102.42	108.81	104.46	108.33	109.42	105.74	107.84
Coffee Forecast	104.00	99.90	100.00	109.97	110.00	120.63	121.25	115.00	115.00	115.00	113.49	118.50
Cotton Forward	65.69	67.56	69.92	75.27	74.99	72.85	75.30	81.40	81.60	81.62	81.93	84.03
Cotton Forecast	72.60	73.00	75.69	76.76	76.76	77.25	77.25	82.41	83.00	84.00	84.00	85.66
▼ Industrial Metals												
Copper Forward (LME)	6,055	6,077	6,008	6,387	6,351	6,472	6,138	6,510	6,530	6,484	6,506	6,486
Copper Forecast (LME)	6,235	6,292	6,331	6,425	6,515	6,531	6,531	6,562	6,603	6,610	6,615	6,712
Aluminum Forward	1,809	1,803	1,806	1,843	1,906	1,927	1,928	2,113	2,117	2,124	2,139	2,180
Aluminum Forecast	1,838	1,863	1,942	1,970	2,020	2,025	2,025	2,130	2,150	2,158	2,161	2,168
Zinc Forward	2,578	2,589	2,634	2,779	2,813	2,708	2,648	2,860	2,856	2,853	2,832	2,835
Zinc Forecast	2,616	2,663	2,744	2,774	2,758	2,707	2,707	2,925	2,930	2,939	2,978	3,055
Nickel Forward	13,341	12,511	12,269	12,487	12,834	12,990	12,389	13,019	13,041	13,181	13,348	13,662
Nickel Forecast	12,530	12,561	12,742	12,983	12,875	12,766	12,603	13,552	13,552	13,651	13,778	13,774
▼ Precious Metals												
Gold Forward	1,378	1,370	1,299	1,295	1,306	1,331	1,330	1,268	1,263	1,263	1,253	1,258
Gold Forecast	1,340	1,323	1,325	1,315	1,294	1,284	1,282	1,268	1,270	1,268	1,275	1,280
Silver Forward	15.92	15.28	14.85	15.17	15.26	15.90	16.15	15.60	15.52	15.54	15.50	15.59
Silver Forecast	15.50	15.58	15.88	16.00	16.00	16.09	15.90	15.78	15.80	15.92	16.20	16.31
Platinum Forecast	860	858	875	878	869	900	900	885	887	885	885	903
Palladium Forecast	1,393.0	1,320.2	1,300.0	1,280.9	1,246.9	1,148.8	1,120.0	1,000.0	995.8	992.1	978.6	975.9
▼ Grain												
Corn Forward	402.3	415.4	415.1	367.8	383.6	382.2	395.5	365.3	361.1	362.4	362.4	360.7
Corn Forecast	393.5	391.4	380.0	381.3	388.0	391.2	391.2	369.6	369.6	374.5	375.2	380.0
Soybeans Forward	882.7	886.5	888.0	872.9	906.7	930.3	944.9	910.2	910.7	899.7	905.9	898.9
Soybeans Forecast	910.0	915.0	920.0	921.4	940.4	962.5	962.5	935.5	935.0	931.5	937.0	950.0
Wheat Forward	486.2	512.4	496.7	446.1	473.7	479.1	533.3	496.6	488.7	489.9	493.7	505.1
Wheat Forecast	497.0	493.9	475.0	488.0	500.0	505.0	511.3	500.0	500.0	502.5	500.5	499.9

Market Flows – Open Interest

Key Metrics

Name	Current	MTD % Change	3 Mth % Change	YTD % Change	11 Yr % Change	2 Yr % Change	2 Year High
▼ Open Interest (Aggregate - 1,000s)							
▼ Single Commodities							
Gold	563	-2.9	31.5	25.7	25.1	28.0	643
Lean Hogs	283	-4.4	-11.0	34.1	18.4	5.2	319
Palladium	26	8.3	13.0	0.0	18.2	-23.5	40
Aluminum	528	7.8	8.4	11.6	16.6	12.6	547
Nickel	189	8.6	27.7	35.0	13.9	26.9	189
Heating Oil	433	13.4	8.0	17.3	9.9	9.1	491
Silver	239	8.1	21.3	37.4	8.1	15.5	244
Copper (LME)	170	3.7	6.9	5.6	6.3	-19.1	219
Live Cattle	321	-8.3	-23.6	-13.2	4.2	-11.3	455
HRW Wheat	288	12.9	-11.9	-1.7	3.2	6.7	342
Gas Oil	1,035	6.2	5.1	26.7	2.5	12.6	1,138
Brent Crude	2,271	-6.6	2.2	5.2	-2.2	-1.1	2,704
Corn	1,782	4.0	9.4	12.6	-3.6	26.8	2,007
Sugar	950	9.8	11.9	8.5	-5.7	23.9	1,062
Platinum	76	-9.5	0.0	-7.3	-7.3	5.6	94
Zinc	160	-7.5	-4.2	12.7	-10.6	-19.6	225
Copper (CME)	269	9.8	8.0	22.8	-10.6	-13.8	338
Natural Gas	1,343	4.2	9.1	10.4	-11.4	2.0	1,700
Crude Oil	2,069	2.6	-3.5	-1.7	-11.9	-7.1	2,714
Coffee	280	5.3	-14.6	2.9	-14.6	28.4	357
Soybean Meal	430	-4.4	-5.5	0.2	-15.9	25.4	538
Unlead Gas	386	4.6	-8.5	-5.4	-16.3	-1.8	501
Soybean Oil	431	2.6	-11.7	-9.5	-16.8	5.6	606
Wheat	379	4.4	-19.7	-12.9	-21.9	-11.5	581
Cotton	197	11.9	-6.6	-7.5	-25.7	-8.8	322
Soybean	606	-5.8	-15.8	-8.7	-26.1	-2.3	976

Historical

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
▼ Open Interest (Aggregate - 1,000s)										
▶ BCOM	14,393	13,672	14,620	12,978	11,965	10,881	11,033	10,367	9,282	10,206
▼ Sector										
▶ Energy	7,528	7,072	7,928	7,097	6,057	5,033	5,346	4,980	4,230	4,262
▶ Agriculture	5,336	5,239	5,168	4,493	4,563	4,211	4,090	3,876	3,418	4,399
▶ Industrial Metals	1,303	1,135	1,354	1,319	1,178	1,224	1,104	1,006	1,159	1,105
▶ Precious Metals	911	731	786	667	673	620	613	658	585	783
▶ Livestock	606	581	572	501	431	481	591	578	552	534
▼ Single Commodities										
Brent Crude	2,280	2,158	2,322	2,159	2,031	1,513	1,443	1,285	886	873
Crude Oil	2,061	2,105	2,458	2,064	1,671	1,468	1,616	1,473	1,328	1,430
Corn	1,776	1,582	1,540	1,236	1,334	1,237	1,203	1,128	1,151	1,549
Natural Gas	1,335	1,216	1,448	1,243	957	939	1,291	1,165	1,011	772
Gas Oil	1,022	817	865	802	700	435	477	512	458	619
Sugar	946	876	753	805	879	836	830	754	559	613
Soybean	606	664	705	632	646	599	576	546	460	629
Gold	572	448	472	416	415	372	380	428	419	585
Aluminum	523	473	520	541	551	595	539	495	682	546
Soybean Oil	441	476	444	372	384	355	340	306	273	358
Heating Oil	438	369	449	429	342	346	279	263	269	301
Soybean Meal	430	429	376	329	402	341	262	212	194	192
Unlead Gas	392	408	387	400	355	332	239	282	277	267
Wheat	379	435	523	448	368	371	411	456	384	492
Live Cattle	320	370	333	306	265	266	327	329	317	327
Lean Hogs	286	211	239	194	166	215	264	248	235	207
HRW Wheat	285	293	330	239	193	132	154	158	139	219
Coffee	275	272	218	191	172	160	142	144	105	140
Copper (CME)	266	219	280	224	166	160	167	147	121	167
Silver	237	174	194	164	168	151	132	141	106	136
Cotton	196	213	279	242	185	178	172	171	152	207
Nickel	189	140	150	160	148	132	81	69	65	61
Copper (LME)	166	161	203	209	146	155	132	130	143	196
Zinc	158	142	200	184	167	182	184	166	148	135
Platinum	76	82	83	63	65	64	62	60	42	39
Palladium	26	26	37	24	24	33	39	29	18	23

Market Flows – Commitment of Traders

Key Metrics

Name	Current	5 Day Change	1 Mth Change	3 Mth Change	YTD Change	1 Yr Change	2 Yr Change
▼ Net - Managed Money Total/Disagg							
▼ Single Commodities							
Corn	153,216	-34,044	9,701	475,431	55,404	283,413	46,401
Gold	217,517	-2,371	27,836	239,845	160,568	244,673	142,469
Coffee	-14,867	-4,044	20,503	63,623	41,479	74,736	6,898
Silver	54,161	26,065	49,413	72,031	45,585	65,504	45,273
Soybean Oil	-39,175	-7,981	3,571	11,462	12,327	50,777	-101,803
Lean Hogs	33,699	-470	-1,412	-28,054	8,960	36,699	-43,603
Platinum	915	6,314	21,974	-21,858	5,479	27,990	8,583
Soybeans	-38,489	446	16,818	91,077	-27,944	22,826	-89,374
Palladium	14,087	61	3,077	4,791	872	12,290	-7,939
Nickel	42,230	-664	-1,792	12,113	13,772	5,041	22,602
Gasoline	91,194	-9,062	15,535	-20,955	38,078	566	62,564
Copper (CME)	-30,583	6,671	13,476	-23,983	-10,387	-4,233	-116,206
Aluminum (Post- MiFID II)	135,138	-8,317	1,599	-5,229	1,248	-5,292	
Zinc (Pre MiFID II)	79,906	-1,121	-6,682	3,640	-471	-8,898	44,606
Aluminum (Pre- MiFID II)	163,475	6,307	-3,292	21,105	3,315	-10,481	115,362
Copper (LME) (Post MiFID II)	13,793	-5,844	-3,259	-4,299	-16,715	-10,782	
Wheat	11,779	-6,972	-10,934	79,771	28,783	-12,163	-16,071
Zinc (Post MiFID II)	40,424	-6,510	989	-15,499	3,912	-16,330	
Live Cattle	26,818	1,375	-9,902	-127,732	-59,441	-21,740	-83,884
Copper (LME) (Pre MiFID II)	37,448	-917	-16,651	-27,111	-31,597	-34,385	25,052
HRW Wheat	-18,337	-2,181	2,407	35,336	-20,772	-40,395	-78,992
Heating Oil	6,406	-1,030	20,665	2,363	4,030	-49,791	7,441
Sugar	-143,298	-75,449	-85,779	-113,632	-103,926	-63,359	-43,578
Soybean Meal	-25,679	-4,665	-25,697	-6,250	-25,065	-75,619	-21,298
Brent Crude	256,319	-24,101	-15,187	-139,947	94,070	-111,321	-32,252
Cotton	-45,230	-960	-14,845	-59,327	-61,233	-126,688	-63,885
Natural Gas	-184,231	-37,143	-34,605	-223,657	-377,341	-209,215	-257,769
WTI Crude	170,840	-28,804	24,102	-143,547	53,239	-221,307	-67,661

Historical

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
▼ Net - Managed Money Total/Disagg										
BCOM	482,060.0	911,257.0	1.2M	1.8M	107,932.0	1.1M	835,105.0	791,313.0	637,042.0	1.6M
▼ Sector										
Energy	340,528.0	528,452.0	1.1M	1.0M	95,835.0	278,790.0	623,230.0	258,739.0	230,666.0	224,236.0
Precious Metals	286,680	74,176	124,419	101,310	-239	153,310	70,026	171,032	134,710	232,650
Livestock	60,517	110,998	136,667	147,051	24,525	117,295	137,611	110,898	104,018	133,520
Agriculture	-160,080	-59,133	-449,709	225,844	-75,733	383,375	-1,048	281,653	188,257	962,170
Industrial Metals		302,863	437,560	423,576	90,351	218,292	35,635	14,988	-4,018	39,105
▼ Single Commodities										
Brent Crude	256,319	162,249	561,284	454,585	163,672	115,571	136,611	125,397	81,537	
Gold	217,517	56,949	109,919	41,247	-24,263	98,391	34,104	101,922	111,919	169,987
WTI Crude	170,840	117,601	411,972	307,909	100,797	199,388	270,386	134,834	192,466	217,046
Corn	153,216	97,812	-206,624	-113,648	-136,111	239,704	-94,812	140,109	148,653	396,782
Aluminum (Post- MiFID II)	135,137	133,889								
Gasoline	91,194	53,116	79,450	50,091	28,391	44,226	54,637	64,383	61,288	67,205
Silver	54,161	8,576	-7,105	39,098	6,282	17,051	5,573	23,113	6,200	26,836
Zinc (Post MiFID II)	40,424	36,512								
Lean Hogs	33,699	24,739	53,957	54,535	13,444	37,193	40,840	51,329	35,913	29,108
Live Cattle	26,818	86,259	82,710	92,516	11,081	80,102	96,771	59,569	68,105	104,412
Palladium	14,087	13,215	25,815	12,742	8,690	19,970	15,660	16,769	5,212	13,034
Copper (LME) (Post MiFID II)	13,793	30,508								
Wheat	11,779	-17,004	-145,735	-108,927	-83,120	20,481	-71,468	-11,899	-29,252	36,542
Heating Oil	6,406	2,376	81,824	33,541	-35,339	-27,087	26,602	23,945	19,644	36,104
Platinum	915	-4,564	-4,210	8,223	9,052	17,898	14,689	29,228	11,379	22,793
Coffee	-14,867	-56,346	-57,846	12,706	-15,181	25,385	-8,417	-23,076	2,905	36,182
HRW Wheat	-18,337	2,435	-34,422	9,085	-14,975	24,999	8,022	23,619	9,128	49,108
Soybean Meal	-25,679	-614	31,257	19,537	-40,843	54,132	57,931	41,489	-15,232	40,129
Copper (CME)	-30,583	-20,196	99,520	72,131	-25,964	-4,455	35,635	14,988	-4,018	39,105
Soybeans	-38,489	-10,545	-69,091	107,075	-63,515	39,446	136,683	109,007	23,683	164,287
Soybean Oil	-39,175	-51,502	3,406	85,522	60,895	35,047	-46,649	-42,424	-2,103	56,961
Cotton	-45,230	16,003	102,402	76,052	51,307	11,005	43,288	25,828	6,683	40,645
Sugar	-143,298	-39,372	-73,056	138,442	165,810	-66,824	-25,626	19,000	43,792	141,534
Natural Gas	-184,231	193,110	-52,446	174,043	-161,686	-53,308	134,994	-89,820	-124,269	-96,119
Copper (LME) (Pre MiFID II)	37,448	69,045	67,384	9,065	25,215					
Aluminum (Pre- MiFID II)	163,475	160,160	145,790	71,738	118,175					
Nickel	42,230	28,458	57,232	15,372	29,631					
Zinc (Pre MiFID II)	79,906	80,377	81,039	20,140	49,726					

**Market Flows – ETF Flows (annual)**

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>ETFs (\$ Billion AUM)</b>										
▼ Total ETF Assets Under Management (\$ ...)	153.79	135.96	141.73	120.33	86.90	101.21	110.90	195.26	171.14	166.46
▼ Precious Metals	129.68	109.30	109.98	90.30	62.95	77.79	84.93	164.56	142.19	130.39
▶ Gold	114.41	96.79	95.36	76.91	51.78	62.75	68.70	143.55	120.89	105.90
▶ Silver	10.85	9.02	10.11	9.41	7.24	8.64	10.60	16.18	16.38	18.41
▶ Platinum	2.75	1.92	2.39	2.26	2.22	3.32	3.46	2.48	2.49	2.83
▶ Palladium	0.87	0.83	1.28	1.07	1.24	2.30	1.40	1.37	1.32	2.12
▶ Precious Metals Basket	0.69	0.65	0.70	0.57	0.40	0.64	0.68	0.92	1.07	1.13
▶ Other	0.10	0.09	0.15	0.08	0.06	0.13	0.10	0.06	0.02	
▶ Broad Commodity	14.03	16.26	17.20	14.78	10.84	14.55	17.70	19.57	18.21	19.74
▶ Energy	7.31	7.34	11.13	12.25	10.71	5.39	4.61	6.70	5.78	9.63
▶ Agriculture	1.43	1.78	1.78	1.82	1.74	2.37	2.61	3.10	3.89	5.22
▶ Industrial Metals	1.33	1.25	1.63	1.17	0.64	1.09	1.02	1.27	0.99	1.38
▶ Livestock	0.02	0.03	0.01	0.02	0.02	0.03	0.03	0.06	0.08	0.10
▼ ETFs Fund Flows (\$ Billion)	6.09	0.75	8.73	23.49	10.67	3.31	-40.94	19.41	1.63	16.32
▶ Precious Metals	8.84	3.60	8.60	22.61	-3.83	-2.45	-36.86	17.69	5.93	14.94
▶ Livestock	0.00	0.00	-0.03	0.01	-0.01	-0.02	-0.04	-0.05	0.03	-0.02
▶ Industrial Metals	-0.01	-0.05	0.05	0.33	-0.14	0.18	-0.17	0.26	-0.14	0.18
▶ Agriculture	-0.13	-0.09	0.32	0.12	-0.14	-0.21	0.03	-0.84	-0.58	-0.54
▶ Energy	-1.09	-3.01	-1.20	-1.97	13.94	4.17	-3.30	1.85	-2.57	-0.42
▶ Broad Commodity	-1.53	0.30	0.99	2.39	0.85	1.64	-0.60	0.50	-1.04	2.18
<b>DELTA WEIGHTED:</b>										
<b>ETFs (\$ Billion AUM) (Dw)</b>										
▼ Total ETF Assets Under Management (\$ ...)	157.83	138.14	146.21	123.02	88.64	101.61	110.16	197.38	171.69	168.43
▼ Precious Metals	130.97	110.51	111.21	91.00	62.94	77.80	85.03	166.20	142.69	131.34
▶ Gold	120.60	102.01	101.00	82.54	55.90	67.72	74.56	153.96	129.87	117.13
▶ Silver	5.93	5.01	5.74	4.50	3.10	3.67	4.83	7.40	7.90	8.10
▶ Platinum	2.76	1.92	2.39	2.24	2.21	3.28	3.39	2.42	2.44	2.85
▶ Palladium	0.87	0.83	1.28	1.07	1.24	2.30	1.40	1.37	1.32	2.12
▶ Precious Metals Basket	0.73	0.68	0.73	0.61	0.43	0.70	0.75	0.99	1.14	1.15
▶ Other	0.08	0.07	0.08	0.04	0.06	0.13	0.10	0.06	0.02	
▶ Broad Commodity	14.31	16.62	17.44	14.80	10.87	14.55	17.70	19.57	18.21	19.75
▶ Energy	9.67	7.84	13.98	14.13	12.28	5.72	3.72	7.20	5.84	10.62
▶ Agriculture	1.50	1.87	1.91	1.90	1.85	2.46	2.69	3.16	3.96	5.27
▶ Industrial Metals	1.35	1.27	1.66	1.19	0.68	1.06	0.99	1.20	0.90	1.35
▶ Livestock	0.02	0.03	0.01	0.02	0.02	0.03	0.03	0.06	0.08	0.10
▼ ETFs Fund Flows (\$ Billion) (Dw)	6.92	-0.37	11.40	19.59	20.77	8.97	-42.11	21.45	1.50	16.50
▼ Precious Metals	8.62	4.13	8.75	22.83	-3.35	-1.85	-36.12	18.57	5.76	14.43
▶ Gold	7.56	4.57	8.47	22.50	-2.99	-3.46	-37.93	15.70	5.28	12.18
▶ Platinum	0.67	-0.17	0.08	0.00	-0.24	0.34	0.14	0.31	0.13	0.80
▶ Silver	0.50	0.36	0.47	0.61	0.45	0.56	1.66	2.56	0.67	0.55
▶ Other	-0.02	-0.04	-0.01	-0.03	0.00	0.01	0.05	0.05	0.02	
▶ Precious Metals Basket	-0.02	-0.04	0.04	0.16	-0.16	-0.01	-0.01	-0.25	0.06	0.37
▶ Palladium	-0.07	-0.55	-0.31	-0.41	-0.41	0.72	-0.03	0.21	-0.41	0.54
▶ Energy	0.08	-4.80	1.10	-6.05	23.41	9.20	-5.34	3.02	-2.59	0.37
▶ Livestock	0.00	0.00	-0.03	0.01	-0.01	-0.02	-0.04	-0.05	0.03	-0.02
▶ Industrial Metals	-0.01	-0.03	0.02	0.30	-0.04	0.20	-0.11	0.27	-0.16	0.13
▶ Agriculture	-0.14	-0.14	0.40	0.12	-0.10	-0.20	0.10	-0.86	-0.50	-0.59
▶ Broad Commodity	-1.63	0.48	1.16	2.38	0.85	1.64	-0.60	0.50	-1.04	2.18

# PERFORMANCE: Bloomberg Commodity Indices

## Composite Indices

\* Click hyperlinks to open in Bloomberg

Index Name	Ticker	2019									
		Jul	YTD	1-Year	3-Year	5-Year	10-Year	20-Year	30-Year	40-Year	50-Year
Bloomberg Commodity ER	<a href="#">BCOM</a>	-0.87%	2.93%	-7.53%	-6.31%	-38.27%	-37.57%	-5.69%	-7.93%	-19.89%	408.37%
Bloomberg Commodity TR	<a href="#">BCOMTR</a>	-0.67%	4.35%	-5.36%	-2.03%	-35.30%	-34.29%	33.74%	117.02%	374.69%	5551.73%
Bloomberg Commodity Spot	<a href="#">BCOMSP</a>	-1.01%	5.54%	-4.18%	10.24%	-15.29%	10.88%	245.51%	274.13%	339.05%	1886.90%
Bloomberg Roll Select	<a href="#">BCOMRST</a>	-0.69%	3.15%	-7.17%	-1.32%	-31.49%	-22.85%	181.68%			
1 Month Forward	<a href="#">BCOMF1T</a>	-0.73%	4.25%	-5.37%	-0.48%	-32.07%	-25.73%	132.70%			
2 Month Forward	<a href="#">BCOMF2T</a>	-0.71%	4.26%	-2.81%	3.72%	-28.96%	-23.52%	181.58%			
3 Month Forward	<a href="#">BCOMF3T</a>	-0.65%	4.25%	-4.77%	2.37%	-28.62%	-21.22%	192.96%			
4 Month Forward	<a href="#">BCOMF4T</a>	-0.70%	4.33%	-4.66%	4.58%	-25.30%	-14.57%				
5 Month Forward	<a href="#">BCOMF5T</a>	-0.65%	4.83%	-4.42%	5.54%	-24.26%	-13.93%				
6 Month Forward	<a href="#">BCOMF6T</a>	-0.67%	4.67%	-3.80%	6.37%	-23.04%	-12.02%				
Energy	<a href="#">BCOMENTR</a>	0.13%	10.78%	-10.26%	10.39%	-60.21%	-71.20%	-41.85%	37.75%		
Petroleum	<a href="#">BCOMPETR</a>	0.67%	25.37%	-10.36%	36.84%	-55.54%	-46.99%	106.32%			
Agriculture	<a href="#">BCOMAGTR</a>	-5.12%	-4.00%	-11.48%	-25.97%	-38.71%	-29.87%	-27.14%	-19.56%	17.75%	1464.69%
Grains	<a href="#">BCOMGRTR</a>	-5.66%	-3.67%	-11.53%	-21.42%	-38.34%	-35.91%	-36.84%	-42.78%	-33.31%	438.69%
Industrial Metals	<a href="#">BCOMINTR</a>	1.41%	6.16%	-5.29%	18.40%	-14.71%	-15.79%	130.03%			
Precious Metals	<a href="#">BCOMPRTR</a>	2.35%	9.69%	13.18%	-4.05%	-0.95%	33.97%	334.75%	261.68%	290.40%	
Softs	<a href="#">BCOMSOTR</a>	-5.22%	-5.10%	-11.30%	-39.92%	-47.93%	-38.39%	-52.08%	-37.98%	35.13%	2513.08%
Livestock	<a href="#">BCOMLITR</a>	2.85%	-4.18%	3.75%	4.93%	-26.40%	-15.43%	-44.06%	-19.00%		
Ex-Energy	<a href="#">BCOMXETR</a>	-1.04%	1.72%	-3.16%	-7.95%	-23.00%	-10.23%	50.72%			
Ex-Petroleum	<a href="#">BCOMXPET</a>	-1.11%	-1.12%	-4.27%	-12.32%	-31.67%	-34.15%				
Ex-Natural Gas	<a href="#">BCOMXNGT</a>	-0.58%	7.05%	-4.77%	2.49%	-29.64%	-16.90%				
Ex-Agriculture	<a href="#">BCOMXAGT</a>	1.18%	8.02%	-2.83%	9.75%	-34.96%	-38.41%				
Ex-Grains	<a href="#">BCOMXGRT</a>	0.30%	6.02%	-4.16%	2.36%	-34.91%	-35.95%				
Ex-Industrial Metals	<a href="#">BCOMXIMT</a>	-1.11%	3.90%	-5.48%	-6.42%	-39.36%	-39.04%				
Ex-Precious Metals	<a href="#">BCOMXPMT</a>	-1.28%	3.33%	-8.48%	-1.80%	-40.78%	-42.63%				
Ex-Softs	<a href="#">BCOMXSOT</a>	-0.34%	5.07%	-4.92%	1.43%	-34.70%	-34.97%				
Ex-Livestock	<a href="#">BCOMXLIT</a>	-0.88%	4.93%	-5.95%	-2.55%	-35.96%	-35.52%				
Ex-Agriculture & Livestock	<a href="#">BCOMXALT</a>	1.04%	9.25%	-3.54%	9.90%	-36.05%	-40.61%				
Bloomberg Dollar Spot	<a href="#">BBDXY</a>	1.85%	1.08%	2.91%	2.37%	18.29%	20.47%				
S&P 500 Total Return	<a href="#">SPXT</a>	1.44%	20.24%	7.99%	45.66%	71.08%	271.71%	229.62%	1537.03%		
US Aggregate	<a href="#">LBUSTRUU</a>	0.22%	6.35%	8.08%	6.66%	16.19%	44.56%	163.62%	462.76%	1591.40%	
US Treasury	<a href="#">LUATTRUU</a>	-0.12%	5.06%	7.56%	3.54%	13.16%	34.28%	143.18%	410.14%	1456.79%	
US Corporate	<a href="#">LUACTRUU</a>	0.56%	10.47%	10.42%	11.31%	22.89%	73.77%	215.58%	605.67%	2029.55%	
US High Yield	<a href="#">LF98TRUU</a>	0.56%	10.56%	6.92%	21.71%	28.22%	129.41%	283.49%	924.00%		

## Single Commodity Indices

Index Name	Ticker	2019									
		Jul	YTD	1-Year	3-Year	5-Year	10-Year	20-Year	30-Year	40-Year	50-Year
Natural Gas	<a href="#">BCOMNGTR</a>	-1.94%	-24.34%	-19.00%	-47.49%	-77.44%	-95.38%	-99.38%			
Low Sulfur Gas Oil	<a href="#">BCOMGOT</a>	0.74%	18.23%	-6.33%	60.12%	-45.31%	-22.06%	312.38%			
WTI Crude	<a href="#">BCOMCLTR</a>	0.30%	26.85%	-13.87%	27.30%	-64.72%	-64.00%	25.15%	225.59%		
Brent Crude	<a href="#">BCOMCOT</a>	0.84%	25.14%	-8.21%	48.17%	-56.01%	-32.26%	346.14%			
ULS Diesel	<a href="#">BCOMHOTR</a>	1.40%	18.80%	-5.93%	43.03%	-44.02%	-27.34%	196.57%	399.32%		
Unleaded Gasoline	<a href="#">BCOMRBTR</a>	0.67%	34.13%	-9.41%	32.18%	-47.84%	-10.58%	313.31%	864.57%		
Corn	<a href="#">BCOMCNTR</a>	-5.58%	1.61%	-3.40%	-15.06%	-35.24%	-31.65%	-76.79%	-81.33%	-79.02%	-27.11%
Soybeans	<a href="#">BCOMSYTR</a>	-4.31%	-6.05%	-10.35%	-24.99%	-30.36%	15.31%	245.20%	226.17%	239.09%	3531.75%
Wheat	<a href="#">BCOMWHTR</a>	-7.41%	-3.90%	-16.80%	-20.37%	-45.19%	-72.15%	-87.13%	-90.98%	-88.21%	-20.59%
Soybean Oil	<a href="#">BCOMBOTR</a>	-1.89%	-1.76%	-7.29%	-18.22%	-36.42%	-48.66%	-14.93%	-23.11%	-23.22%	2743.87%
Soybean Meal	<a href="#">BCOMSMT</a>	-5.23%	-5.06%	-14.18%	-22.54%	-12.87%	98.56%	1082.33%			
HRW Wheat	<a href="#">BCOMKWT</a>	-8.22%	-17.15%	-32.80%	-36.90%	-66.43%	-74.75%	-77.32%			
Copper	<a href="#">BCOMHGTR</a>	-1.56%	2.19%	-5.44%	16.30%	-21.47%	-11.22%	279.10%	686.59%		
Aluminium	<a href="#">BCOMALTR</a>	-0.36%	-4.18%	-14.68%	6.82%	-19.60%	-38.46%	-21.46%			
Zinc	<a href="#">BCOMZSTR</a>	-1.83%	4.26%	1.89%	21.08%	9.89%	19.08%	70.56%			
Nickel	<a href="#">BCOMNITR</a>	14.41%	35.93%	3.47%	33.63%	-25.61%	-28.12%	313.58%			
Gold	<a href="#">BCOMGCTR</a>	1.01%	11.12%	15.94%	3.23%	7.90%	40.67%	399.06%	270.75%	351.82%	
Silver	<a href="#">BCOMSITR</a>	7.14%	5.20%	4.49%	-22.29%	-24.49%	5.61%	157.12%	155.47%	32.25%	
Sugar	<a href="#">BCOMSBTR</a>	-3.06%	0.79%	8.49%	-44.67%	-50.42%	-53.88%	1.23%	10.21%	-45.69%	122.40%
Coffee	<a href="#">BCOMKCTR</a>	-8.78%	-8.62%	-19.53%	-49.48%	-68.91%	-67.87%	-90.43%	-83.28%	-75.40%	
Cotton	<a href="#">BCOMCTTR</a>	-3.20%	-11.79%	-29.78%	-12.81%	2.67%	45.41%	-67.30%	-48.82%	178.74%	1069.57%
Live Cattle	<a href="#">BCOMLCTR</a>	2.09%	-4.81%	1.81%	8.67%	-14.22%	0.65%	4.85%	80.24%	788.12%	3697.26%
Lean Hogs	<a href="#">BCOMLHTR</a>	4.00%	-4.31%	7.11%	-5.33%	-46.21%	-38.76%	-79.98%	-82.09%		

## PERFORMANCE: Bloomberg Commodity Roll Select Indices

Composite Roll Select Indices \* [Click hyperlinks to open in Bloomberg](#)

Index Name	Ticker	2019		1-Year	3-Year	5-Year	10-Year	20-Year	30-Year	40-Year	50-Year
		Jul	YTD								
BCOM Roll Select	<a href="#">BCOMRST</a>	-0.69%	3.15%	-7.17%	-1.32%	-31.49%	-22.85%	181.68%			
Roll Select Agriculture	<a href="#">BCOMRAGT</a>	-4.75%	-4.22%	-11.64%	-22.28%	-36.08%	-19.78%	35.69%			
Roll Select Ex-Ags & Livestock	<a href="#">BBURXALT</a>	0.97%	7.36%	-6.20%	10.04%	-30.75%	-28.67%				
Roll Select Grains	<a href="#">BCOMRGRT</a>	-5.08%	-3.53%	-11.47%	-17.11%	-34.89%	-27.00%	24.03%			
Roll Select Softs	<a href="#">BCOMRSOT</a>	-5.08%	-6.52%	-12.98%	-40.16%	-48.81%	-28.91%	-13.06%			
Roll Select Livestock	<a href="#">BCOMRLIT</a>	1.45%	-3.41%	2.12%	-9.14%	-34.63%	-9.26%	61.12%			
Roll Select Energy	<a href="#">BCOMRENT</a>	0.01%	7.06%	-14.35%	10.93%	-51.90%	-57.92%	128.02%			
Roll Select Ex-Energy	<a href="#">BCOMRXET</a>	-1.02%	1.53%	-3.80%	-7.31%	-22.26%	-2.66%	154.63%			
Roll Select Petroleum	<a href="#">BCOMRPET</a>	0.72%	21.07%	-11.25%	37.07%	-46.59%	-28.48%	465.71%			
Roll Select Industrial Metals	<a href="#">BCOMRINT</a>	1.38%	5.72%	-6.70%	17.78%	-14.44%	-10.90%	239.38%			
Roll Select Precious Metals	<a href="#">BCOMRPRT</a>	2.38%	9.62%	13.10%	-4.12%	-0.58%	35.07%	352.06%			

## Single Commodity Roll Select Indices

Index Name	Ticker	2019		1-Year	3-Year	5-Year	10-Year	20-Year	30-Year	40-Year	50-Year
		Jul	YTD								
Natural Gas RS	<a href="#">BCOMRNGT</a>	-2.42%	-25.94%	-26.62%	-42.67%	-70.07%	-90.19%	-89.62%			
Low Sulfur Gas Oil RS	<a href="#">BCOMRGOT</a>	-0.58%	15.66%	-8.63%	47.95%	-44.38%	-22.26%	328.03%			
WTI Crude RS	<a href="#">BCOMRCLT</a>	1.20%	24.26%	-10.25%	32.51%	-50.24%	-37.01%	447.97%			
Brent Crude RS	<a href="#">BCOMRCOT</a>	0.84%	19.85%	-12.11%	45.08%	-48.17%	-24.19%	582.67%			
ULS Diesel RS	<a href="#">BCOMRHOT</a>	0.67%	17.66%	-7.66%	32.37%	-45.07%	-30.18%	373.87%			
Unleaded Gasoline RS	<a href="#">BCOMRRBT</a>	0.37%	23.93%	-12.29%	40.14%	-37.12%	3.37%	535.28%			
Corn RS	<a href="#">BCOMRCNT</a>	-4.80%	2.48%	-2.07%	-10.12%	-30.27%	-23.46%	-54.88%			
Soybeans RS	<a href="#">BCOMRSYT</a>	-3.61%	-4.37%	-7.99%	-12.41%	-20.03%	44.19%	431.55%			
Wheat RS	<a href="#">BCOMRWHT</a>	-7.40%	-7.37%	-21.96%	-28.85%	-51.24%	-70.69%	-58.30%			
Soybean Oil RS	<a href="#">BCOMRBOT</a>	-1.89%	-2.00%	-7.91%	-18.40%	-36.04%	-42.97%	23.53%			
Soybean Meal RS	<a href="#">BCOMRSMT</a>	-5.03%	-4.30%	-11.78%	-10.69%	-5.57%	130.13%	1531.95%			
HRW Wheat RS	<a href="#">BCOMRKWT</a>	-8.22%	-18.82%	-33.25%	-36.24%	-65.01%	-71.99%	-46.24%			
Copper RS	<a href="#">BCOMRHGT</a>	-1.33%	2.19%	-6.37%	17.11%	-21.48%	-6.77%	436.13%			
Aluminium RS	<a href="#">BCOMRALT</a>	-0.70%	-4.51%	-15.82%	4.35%	-18.88%	-34.09%	15.39%			
Zinc RS	<a href="#">BCOMRZST</a>	-1.95%	3.22%	-1.66%	19.74%	9.08%	25.20%	163.73%			
Nickel RS	<a href="#">BCOMRNIT</a>	14.24%	35.04%	2.70%	33.37%	-24.96%	-23.68%	575.85%			
Gold RS	<a href="#">BCOMRGCT</a>	1.02%	11.07%	15.89%	3.15%	8.38%	41.37%	405.60%			
Silver RS	<a href="#">BCOMRSIT</a>	7.20%	5.04%	4.30%	-22.34%	-24.23%	7.69%	187.77%			
Sugar RS	<a href="#">BCOMRSBT</a>	-2.90%	-2.30%	2.04%	-47.67%	-53.72%	-48.31%	119.19%			
Coffee RS	<a href="#">BCOMRKCT</a>	-8.53%	-8.86%	-18.90%	-48.94%	-67.63%	-63.79%	-84.04%			
Cotton RS	<a href="#">BCOMRCTT</a>	-3.70%	-12.09%	-29.57%	-9.74%	2.66%	74.03%	-44.71%			
Live Cattle RS	<a href="#">BCOMRLCT</a>	2.09%	-4.93%	-0.63%	4.58%	-17.11%	7.52%	77.64%			
Lean Hogs RS	<a href="#">BCOMRLHT</a>	0.41%	0.01%	10.40%	-29.05%	-57.06%	-34.08%	14.91%			

## BCOM Constituent Weights

[BCOM Index MEMB <GO>](#)

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Group	Commodity	Ticker	Jul 2019 Contrib to Return %	Jul 31 2019 Weight %	Jun 28 2019 Weight %	Jul 2019 Weight% Change	2019 Target Weight
Energy	Natural Gas	<a href="#">NG</a>	-0.13	6.29	6.36	↓ (0.07)	8.26%
	Low Sulfur Gas Oil	<a href="#">QS</a>	0.01	2.83	2.79	↑ 0.04	2.62%
	WTI Crude	<a href="#">CL</a>	0.01	8.92	8.82	↑ 0.10	7.66%
	Brent Crude	<a href="#">CO</a>	0.05	8.02	7.97	↑ 0.06	7.34%
	ULS Diesel	<a href="#">HO</a>	0.03	2.33	2.28	↑ 0.05	2.16%
	Gasoline	<a href="#">XB</a>	0.02	3.06	3.02	↑ 0.05	2.29%
	<b>Subtotal</b>			<b>-0.01</b>	<b>31.45</b>	<b>31.23</b>	<b>↑ 0.22</b>
Grains	Corn	<a href="#">C</a>	-0.36	5.99	6.29	↓ (0.30)	5.89%
	Soybeans	<a href="#">S</a>	-0.26	5.58	5.78	↓ (0.20)	6.03%
	Wheat	<a href="#">W</a>	-0.23	2.87	3.08	↓ (0.20)	3.14%
	Soybean Oil	<a href="#">BO</a>	-0.06	2.98	3.02	↓ (0.03)	3.10%
	Soybean Meal	<a href="#">SM</a>	-0.18	3.17	3.31	↓ (0.15)	3.44%
	HRW Wheat	<a href="#">KW</a>	-0.10	1.06	1.14	↓ (0.09)	1.29%
	<b>Subtotal</b>			<b>-1.20</b>	<b>21.64</b>	<b>22.62</b>	<b>↓ (0.98)</b>
Industrial Metals	Copper	<a href="#">HG</a>	-0.13	7.18	7.23	↓ (0.05)	7.32%
	Aluminum	<a href="#">LA</a>	-0.02	4.06	4.05	↑ 0.02	4.41%
	Zinc	<a href="#">LX</a>	-0.06	3.04	3.07	↓ (0.03)	3.21%
	Nickel	<a href="#">LN</a>	0.42	3.42	2.97	↑ 0.46	2.71%
	<b>Subtotal</b>			<b>0.20</b>	<b>17.71</b>	<b>17.32</b>	<b>↑ 0.39</b>
Precious Metals	Gold	<a href="#">GC</a>	0.11	13.24	12.89	↑ 0.35	12.24%
	Silver	<a href="#">SI</a>	0.25	3.93	3.64	↑ 0.29	3.89%
	<b>Subtotal</b>			<b>0.36</b>	<b>17.17</b>	<b>16.53</b>	<b>↑ 0.65</b>
Softs	Sugar	<a href="#">SB</a>	-0.10	2.95	3.02	↓ (0.07)	3.15%
	Coffee	<a href="#">KC</a>	-0.23	2.33	2.54	↓ (0.20)	2.48%
	Cotton	<a href="#">CT</a>	-0.04	1.21	1.24	↓ (0.03)	1.42%
	<b>Subtotal</b>			<b>-0.37</b>	<b>6.49</b>	<b>6.79</b>	<b>↓ (0.30)</b>
Livestock	Live Cattle	<a href="#">LC</a>	0.11	3.47	3.33	↑ 0.14	4.09%
	Lean Hogs	<a href="#">LH</a>	0.11	2.06	2.18	↓ (0.12)	1.85%
	<b>Subtotal</b>			<b>0.22</b>	<b>5.53</b>	<b>5.51</b>	<b>↑ 0.02</b>
<b>Total</b>			<b>-0.80</b>	<b>100.00</b>	<b>100.00</b>		<b>100.00%</b>

# BLOOMBERG INTELLIGENCE: COMMODITY DASHBOARDS

**BI <GO>** \* Click hyperlinks to open in Bloomberg

BI provides analysis on several key drivers of BCOM performance; industrial and precious metals mining, oil and natural gas production, and agricultural chemicals. The dashboards include key macro data libraries and interactive charting and commentary from analysts with an average of seventeen years of experience.

## Crude Oil Production: BI OILS <GO>

Region	2015	2014	2013	2012	2011
<b>OECD</b>	45.6	45.6	46.1	45.9	46.4
Americas	24.2	24.1	24.1	23.6	24.0
United States	19.2	19.0	18.8	18.7	18.9
Canada	2.4	2.4	2.4	2.4	2.3
Chile	0.3	0.3	0.3	0.3	0.3
Mexico	2.0	2.0	2.0	2.1	2.1
Latin America	18.4	18.5	18.7	18.4	18.6
Pacific	6.0	8.1	8.3	8.5	8.2
<b>Non-OECD</b>	47.9	46.9	45.7	44.6	43.1
Europe	4.7	4.9	4.7	4.8	4.5
China	10.7	10.4	10.1	9.8	9.4
Other Asia	12.5	12.1	11.9	11.6	11.2
Latin America	6.9	6.8	6.6	6.4	6.2
Middle East	6.3	8.1	7.9	7.8	7.5
Africa	4.1	3.9	3.8	3.8	3.6
<b>Total World Crude Oil Demand</b>	<b>93.5</b>	<b>92.5</b>	<b>91.8</b>	<b>90.6</b>	<b>89.5</b>

## Natural Gas Production: BI NGAS <GO>

Category	Current	Prev Week	1 Week % Chg	1 Week % Chg	Prev Year
<b>US Working Storage (BCF)</b>					
East	559.00	581.00	-22.00	-3.79	356.00
West	244.00	239.00	4.00	1.70	164.00
Producing	576.00	548.00	28.00	5.11	376.00
<b>Total</b>	<b>1,479.00</b>	<b>1,467.00</b>	<b>12.00</b>	<b>0.82</b>	<b>896.00</b>
<b>Net Injections/Withdrawals</b>	<b>12.00</b>	<b>-42.00</b>	<b>54.00</b>	<b>452.07</b>	<b>-57.00</b>
<b>Consensus (Bloomberg Survey)</b>	<b>1,474.00</b>	<b>1,463.00</b>	<b>11.00</b>	<b>0.75</b>	<b>901.00</b>
<b>Domestic Working Storage (BCF)</b>					
East	219.76	219.77	-0.01	-0.00	113.79
West	49.53	49.52	-0.98	-1.99	22.76
<b>Total</b>	<b>269.29</b>	<b>269.28</b>	<b>-0.99</b>	<b>-0.37</b>	<b>136.46</b>

## Precious Metal Mining: BI PMET <GO>

Indicator	Value
Avg Gold Spot Price	1,220
Known ETF Gold Hold	52,128
IMF Global Gold Reser	1,036
Sales Growth (YoY)	-8.90
EBITDA Margin (%)	70.89
T12M Sales Growth (%)	83
Return on Equity (%)	2.91
Est P/E Current Yr	61.79
Price/Book	1.84

## Agricultural Chemicals: BI AGCH <GO>

Indicator	Value
Agricultural Price Ind	1.25
U.S. Farm Net Cash In	0.40
U.S. Corn Price Future	3.60
Sales Growth (YoY)	2.63
EBITDA Margin (%)	15.30
EPS Growth (YoY)	-11.17
ROIC (%)	7.83
Est P/E Current Yr	15.00
Price/Book Ratio	1.00

## Copper: BI COPP <GO>

Indicator	Value
China GDP (YoY)	7.30
YTD Copper Surplus	201.15k
Major Exch Copper Inv	599.9%
Sales Growth (YoY)	-1.59
EBITDA Margin (%)	26.52
T12M Sales Growth (%)	-2.59
Return on Equity (%)	2.71
Est P/E Current Yr	17.46
Price/Book	1.09

## Aluminum: BI ALUM <GO>

Indicator	Value
China Industrial Prod	7.60
Global Primary Alumi	4.28M
Global Primary Alumi	4.17M
Sales Growth (YoY)	2.18
EBITDA Margin (%)	8.70
T12M Sales Growth (%)	1.46
Return on Equity (%)	4.95
Est P/E Current Yr	15.05
Price/Book	1.38

## COMMODITY CHEAT SHEET FOR THE BLOOMBERG PROFESSIONAL® SERVICE

The data provided in this report can be easily accessed on the Bloomberg Professional® service along with numerous news and analytical tools to help you stay on top of the commodity markets.

\* [Click hyperlinks to open in Bloomberg](#)

### Broad Commodities

Top commodity news	<a href="#">CTOP</a>
Global commodity prices	<a href="#">GLCO</a>
Commodity playbook	<a href="#">CPLY</a>
Commitments of traders report	<a href="#">COT</a>
Calendar of commodity events	<a href="#">ECO17</a>
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### Commodity Indices

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Crop calendar	<a href="#">CCAL</a>

## BCOM QUICK FACTS

### [Index Methodology](#)

Weighting Bias	2/3 market liquidity and 1/3 world production
No. of Commodities	20
Re-balancing Frequency	Annual
Roll Schedule	Monthly (5 day roll)
Caps/Limits	Single commodity: max 15% Single commodity and its derivatives: max 25% Related commodity groups: max 33%
First Value Date	30 December 1990

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