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# A Firming Foundation

- Commodities enter favorable recovery zone vs. primary companions
- China PMI & the dollar are prime for mean reversion
- A tale of two metals markets favors both industrial, precious
- Complacency over unusual run of high yields supports agriculture prices
- WTI crude oil is more vulnerable to revisiting \$50 than \$70

Note - Click on graphics to get to the Bloomberg terminal

Data and outlook as of March 31

Mike McGlone – BI Senior Commodity Strategist

[BI COMD](#) (the commodity dashboard)

## Commodity-Recovery Foundation Solidifying vs. Extended Equities

Performance: March +0.2%, 2019 +6.3%, Spot +7.4%.  
 (Returns are total return (TR) unless noted)

(Bloomberg Intelligence) -- All risk assets are subject to sharp stock-market declines, but we expect commodities' favorable reward vs. risk profile to continue improving. Futures' increasing expectation of Federal Reserve easing leaves a final pillar of dollar support -- U.S. vs. global equity outperformance. Commodity risks center on West Texas Intermediate crude oil and its increasing correlation to the S&P 500. Limited upside to above 2,800 in the latter indicates a WTI revisit of \$50 a barrel. Metals should continue to shine in most scenarios, as the end of U.S. equities outpacing global stocks would be a primary dollar headwind.

Sentiment about the Corn Belt's risk of production cuts in early growing season has rarely been this complacent, elevating the prospect of higher prices. Our updated quarterly analysis indicates early commodity recovery.

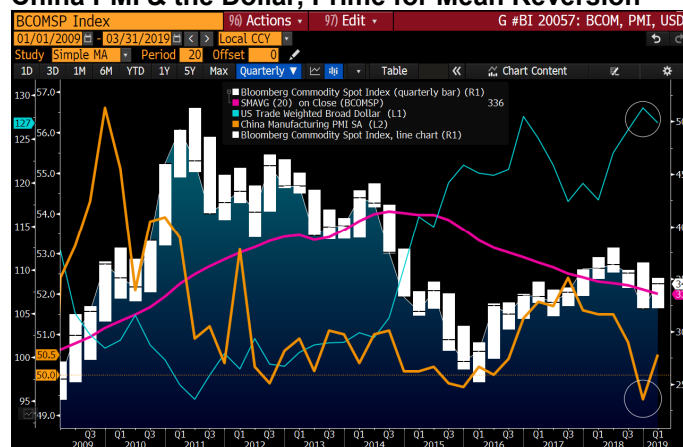
### Favored Vs. Wobbly Stocks

**Commodities Enter Favorable Recovery Zone vs. Primary Companions.** Just a little mean reversion in primary broad-commodity companions -- China's purchasing managers' index and the dollar -- should have an outsized positive effect on prices. Reward vs. risk for commodities is favorable, notably vs. U.S. equities. If stocks decline, it's a dollar headwind and favors commodity bulls.

**Long-Term Commodity Drivers Turn Higher.** Limited upside in the dollar and downside in China's PMI support acceleration of the nascent bull market in commodities. Our graphic depicts the 20-quarter average of the Bloomberg Commodity Spot Index in early days of a

bear-to-bull transition vs. the lowest quarter-end PMI level in a decade and a potential peak in the trade-weighted broad dollar from the 16-year high in 4Q. Indications from these top companions could get worse for commodities, but the longer-term mean-reversion potential appears to be more significant from such extremes.

### China PMI & the Dollar, Prime for Mean Reversion



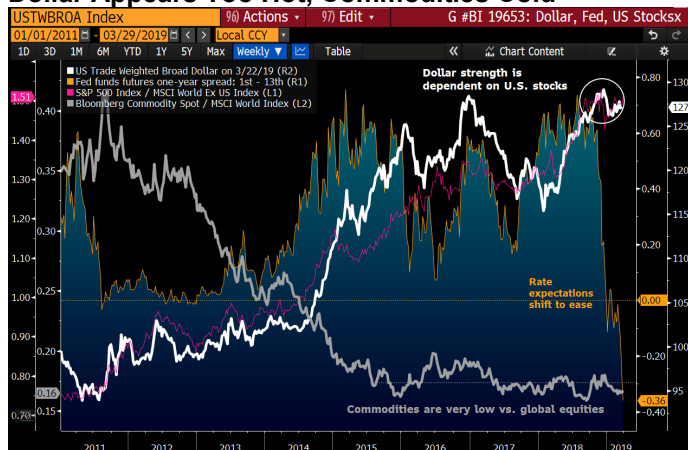
In the history of the PMI since 2004, the annual correlation of the Bloomberg Commodity Index is about 0.70 vs. about a minus 0.70 reading to the dollar.

**Dollar Hanging By a Thread Is Commodity Pillar.** A commodities recovery is highly dependent on a peak dollar, as greenback reversion to a lower mean is more probable than its appreciation potential, in our view. In addition, the S&P 500 is unlikely to continue to double the MSCI World Excluding U.S. Index's return, as it has since 2010. U.S. equity-market outperformance is a final dollar-support pillar following the shift to easing in the fed funds' one-year futures spread.

# Bloomberg Commodity Outlook – April 2019 Edition

## Bloomberg Commodity Index (BCOM)

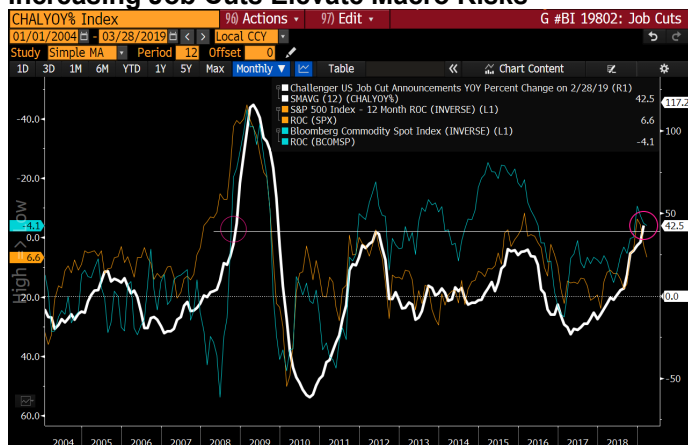
### Dollar Appears Too Hot, Commodities Cold



Our graphic depicts potential early reversion in the strong-dollar trend. Flat for the fourth year, the ratio of the Bloomberg Commodity Spot Index vs. MSCI World gauge should be a primary beneficiary of a dollar peak. In the past 20 years measured annually, the dollar has a positive 0.73 correlation to the S&P 500 vs. World ratio, and as negative a number vs. the Bloomberg Commodity Index (BCOM).

**U.S. Job Cuts at 10-Year High Is Macro-Negative for Commodities.** A shift to the highest 12-month average in Challenger job-cut announcements in a decade, a key macroeconomic indicator, has negative implications for commodities. Our graphic depicts the strong inverse relationship between job cuts vs. the S&P 500 and, to a lesser extent, the Bloomberg Commodity Spot Index. Indicating an extreme disparity that's at risk of narrowing, the unemployment rate in November 2008 was 7% when cuts were at the same level in a similar upward trajectory. It's now 4%.

### Increasing Job Cuts Elevate Macro Risks



A low unemployment rate should soften the blow of job reductions, but the risks are clear. A continuation of last year's stock-market swoon is a primary risk for

commodities, notably crude oil and copper. Weak U.S. equities should pressure the dollar, which is a commodity tailwind, particularly for gold.

## MACRO PERFORMANCE

**Elevated Risk for Top Macro Performer Crude Oil.** The dollar at the bottom of the macro performers is more likely to be sustained when U.S. stocks stop outperforming global equities, which is broad-commodity supportive. Crude oil ending 1Q up about 30% remains a primary commodity-market risk factor, particularly if the sharp stock-market recovery reverses. This unique dynamic supports a favorable risk-to-reward profile in broad commodities vs. equities. Up about 13% in 1Q, the S&P 500 has had a good year, but it's vulnerable near good resistance at 2,800, with many indicators flashing warning signals.

### Crude Oil Is Vulnerable With Wobbly Equities

Security	Chg YTD %	Chg March	Chg QTD	Chg Pct	1Yr % Chg	2Yr % Chg
Generic 1st 'CL' Future	+32.4%	+5.1%	+32.4%	-7.4%	21.5%	
S&P 500 Total Return Index	+13.6%	+1.9%	+13.6%	+9.5%	24.8%	
S&P 500 Index	+13.1%	+1.8%	+13.1%	+7.3%	20.0%	
Generic 1st 'HG' Future	+11.6%	-0.5%	+11.6%	-3.0%	9.7%	
MSCI World ex USA Net Total Re	+10.4%	+0.5%	+10.4%	-3.1%	10.3%	
MSCI Emerging Markets Net Tota	+9.9%	+0.8%	+9.9%	-7.4%	15.7%	
Bloomberg Commodity Spot Index	+7.4%	-0.1%	+7.4%	-4.1%	3.7%	
Bloomberg Commodity Index Tota	+6.3%	-0.2%	+6.3%	-5.3%	-1.7%	
Bloomberg Barclays U.S. Treasu	+4.7%	+5.4%	+4.7%	+6.2%	10.3%	
Gold	+0.8%	-1.6%	+0.8%	-2.5%	3.1%	
Bloomberg Dollar Spot	+0.2%	+0.7%	+0.2%	+6.5%	-1.7%	
US Trade Wgt Broad Dollar Indx	-0.6%	+0.4%	-0.6%	+7.6%	2.4%	

We expect last year's strong dollar performance to have marked a last gasp for the bull market, and for the greenback to remain near the bottom of 2019 performers, which is primarily supportive of metals.

## SECTOR PERFORMANCE

### Weak Grains Set to Trade Places With Strong Energy.

The best-performing sector (energy), and the worst (grains), have elevated potential of reversal, at least in 2Q, in our view. A historically low Corn Belt growing-season production-risk premium lifts prospects for grain prices, which often peak in 2Q. Progress on a U.S.-China trade deal is additional support. Crude oil -- the primary energy driver -- is quite vulnerable with WTI potentially backing away from good resistance near \$60 a barrel, and with the S&P 500 at 2,800.

Precious metals should continue to mark time with the dollar, both ending 1Q about unchanged. The metals sector appears to have the most favorable reward vs. risk

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Bloomberg Commodity Index (BCOM)

profile in most scenarios. Industrial metals are well-supported with the stock market, but if volatility continues to increase, it'll be a dollar headwind.

## Trading Places Risks Favor Corn vs. Crude Oil

Security	Chg YTD %	Chg March	Chg QTD	Chg Pct	1Yr % Chg	2Yr % Chg
Bloomberg Energy Subindex Tota	+15.9%	+7%	+15.9%	-5%	9.3%	
Bloomberg Industrial Metals Su	+12.8%	+9%	+12.8%	-3.1%	9.2%	
Bloomberg All Metals Total Ret	+6.7%	-4%	+6.7%	-3.2%	3.7%	
Bloomberg Livestock Subindex T	+4.7%	+6.3%	+4.7%	+14.4%	9.3%	
BBG Softs TR	+4%	-7%	+4%	-13.2%	-30.5%	
Bloomberg Precious Metals Subi	--	-2.0%	--	-4.0%	-3.5%	
Bloomberg Agriculture Subindex	-3.2%	-2.2%	-3.2%	-16.3%	-20.8%	
Bloomberg Grains Subindex Tota	-5.8%	-2.6%	-5.8%	-16.9%	-19.9%	

## Energy (Index weight: 29% of BCOM)

Performance: March +0.7%, 2019 +15.9%, Spot +17.6%

\*Note index weights are the 2018 average.

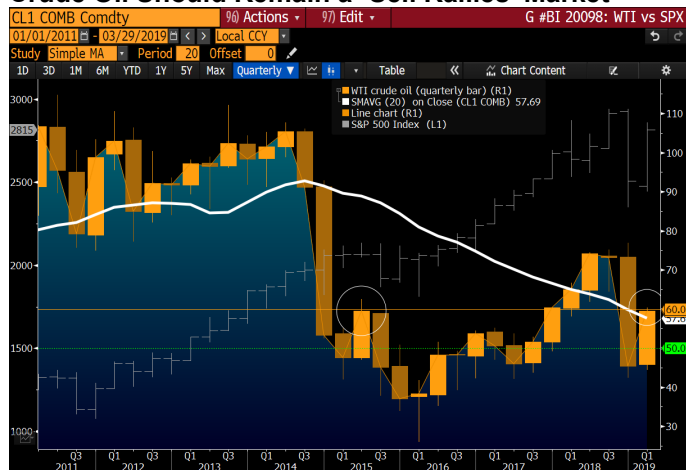
## Energy Bears Gaining Favor

**WTI Crude Oil Is More Vulnerable to Revisiting \$50 Than \$70.** Consistent with past trends, responsive sellers are likelier to prevail in an oversupplied crude-oil market, pressuring 2Q prices, in our view. West Texas Intermediate, the most significant benchmark in the production paradigm, seems as vulnerable near \$60 a barrel at the end of 1Q as it was favored for recovery when priced at \$45 in 4Q.

**Oversupplied Conditions Favor Responsive Sellers.** WTI crude oil is vulnerable to revisit \$50-a-barrel support, in our view, with the wobbling stock market an increasing headwind. Since 4Q15, the quarterly WTI-to-S&P 500 correlation has increased toward 0.70, more than double the level of the past 20 years. The primary reason for the 30% gain in 2019 is that crude oil ended 4Q near good support at \$45 a barrel as the S&P 500 met 2,400. Recovering to \$60 a barrel in 1Q with the S&P 500 at 2,800 leaves crude oil highly prone to equities backing away.

Our graphic, which shows crude oil revisiting its downward-sloping 20-quarter average in 1Q, suggests it shouldn't take much for WTI to retreat. Production cuts -- the primary focus of OPEC and Russia -- are indicative of our primary concern -- oversupply.

## Crude Oil Should Remain a 'Sell Rallies' Market



**Crude-Oil Bulls to the S&P 500 Index -- We Need You Above 2,800.** There's little room for further appreciation in crude oil, absent similar in the stock market, in our view. Key lines in the sand have been reached. In the S&P 500, about 2,800 was the last gasp before the December plunge as the Fed hiked interest rates, possible for the last time. On the way down in November, it was the rapid breach of then-\$60-a-barrel support in West Texas Intermediate that indicated macro risk-off. Now resistance, it's unlikely WTI can sustain above \$60 without the S&P 500 doing the same, above 2,800.

## WTI Likely to See \$50 If S&P 500 Holds Resistance



An oversupplied market, temporarily supported by production cuts from Saudi Arabia and Russia and U.S. sanctions on Iran and Venezuela, crude oil is vulnerable to further declines. On a 20-week basis, the WTI-to-S&P 500 correlation is 0.67, about double that of the annual measure in the past 20 years.

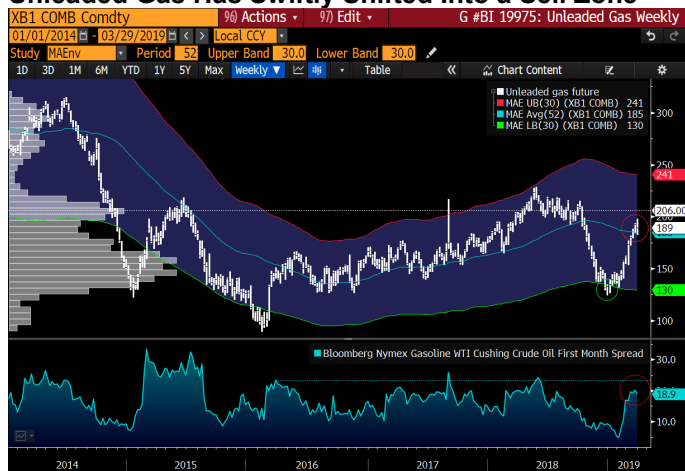
**Unleaded Gas at Risk of Responsive Selling.** What was well-supported in December-January now appears near resistance. We believe unleaded gasoline, the top-performing major commodity so far this year, is

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Bloomberg Commodity Index (BCOM)

vulnerable to mean reversion. Up over 40% to March 29, the front unleaded gas future (RBOB) has returned to its downward-sloping 52-week average and is near the upper end of its range vs. West Texas Intermediate (WTI). The sharp -- and suspect -- V-shaped recovery from December's oversold condition is most pronounced in the gasoline-to-WTI crack spread.

### Unleaded Gas Has Swiftly Shifted Into a Sell Zone

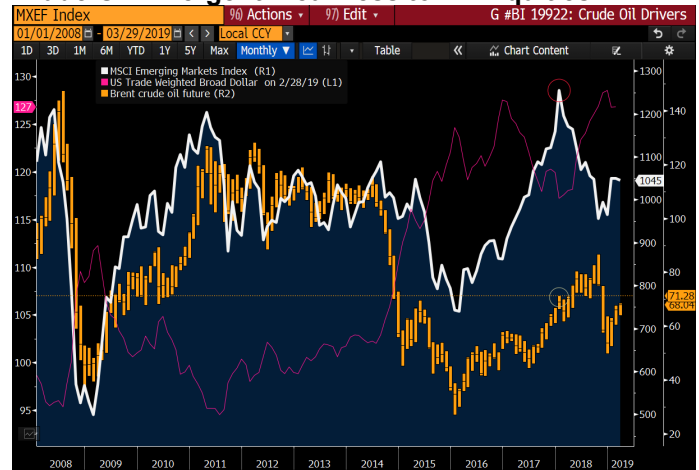


Now close to 19, the NYMEX RBOB-WTI crack bottomed at a nine-year low (4) in January, but further upside is limited. Since the crude-oil bull market began in early 2016, 25 has held resistance. The inverted, P-shaped gasoline-price pattern since 2014 emphasizes the bearish overtone.

**EM Crude-Oil Price Support Is Diminishing.** Crude-oil prices are showing diminishing returns vs. emerging-market equities. An example of the declining price support from EM equities is that the MSCI Emerging Markets Index is at about the same level it was in August, when Brent crude was near \$80 a barrel, and 2012-13, when it was \$110 a barrel, yet Brent was only \$68 a barrel on March 29. Last year, EM was more of a leading indicator for crude oil -- its peak in January, coinciding with a near-term high in Brent near \$71, should mark good resistance.

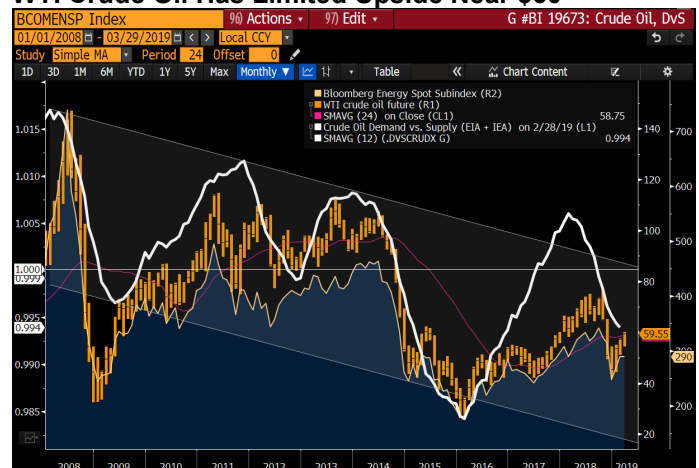
Changing demographics and rapidly advancing technology have shifted most crude-oil incremental demand from developed countries to EM. Crude oil is 0.70 correlated to the MSCI Emerging Markets Index on a 20-year annual basis, which is about the same to International Energy Agency global demand vs. supply estimates.

### Crude Oil Divergent Weakness to EM Equities



**It's Been a Good Year Already in Crude Oil.** Crude oil will remain under pressure, we believe, with unfavorable demand vs. supply conditions keeping a lid on prices. WTI's sharp recovery to a high of \$60.73 a barrel is at a steep risk of marking the 2019 peak. Sustained supply reductions from OPEC and Russia should be necessary to support a market that's clearly at a surplus, based on our analysis of IEA and EIA data.

### WTI Crude Oil Has Limited Upside Near \$60



Led by surging U.S. and Canadian production and declining additional demand, the trend in energy prices is down. The 2018 rally that resulted in an average WTI price of \$63.66 appears similar to 2011, when the average per-barrel price was \$95.08. At about \$60 on March 29, there's plenty of incentive for strong North American production.

### U.S. Fuel Production to Overtake Consumption.

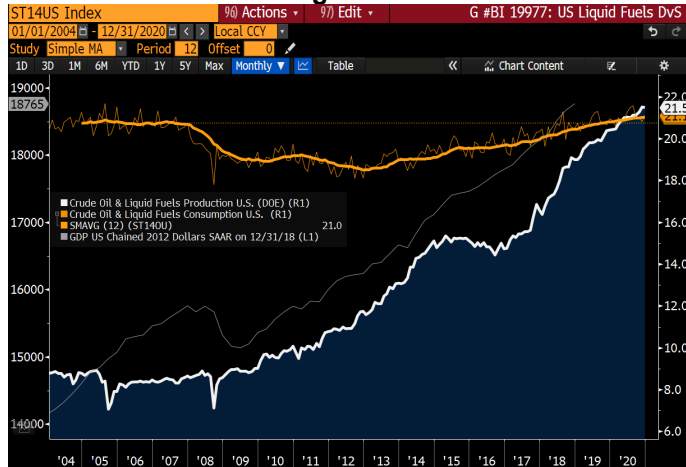
Rapidly increasing U.S. fuel production vs. flat consumption indicates an unleaded-gas market that should struggle to maintain rallies, in our view. Seemingly unstoppable U.S. crude oil and liquid fuels output is facing off against almost stagnant domestic consumption,

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## Bloomberg Commodity Index (BCOM)

despite increasing GDP. In addition, the trend from the Department of Energy is revising production estimates higher, with current projections for output to exceed consumption in about a year.

### This is No Place for Long-Term Gasoline Bulls



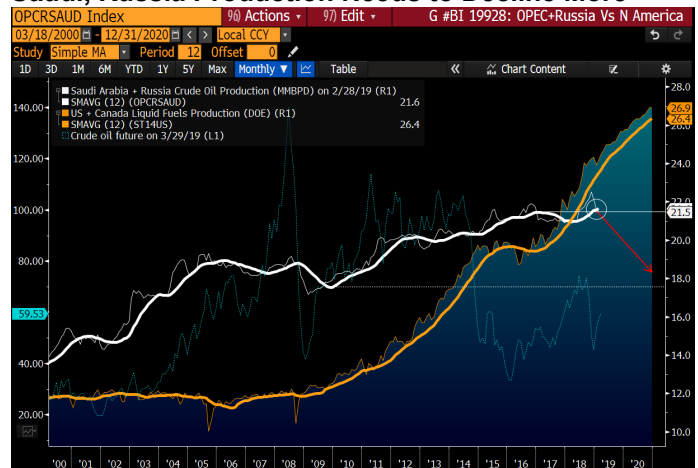
Since the end of 2007, consumption of U.S. crude oil and liquid fuels is flat despite an almost-20% increase in GDP, while production has more than doubled, with biofuels playing a big part. President Donald Trump last year announced that 10% ethanol (E10) blended in gasoline will be bumped to E15.

### Saudi Arabia, Russia Crude Cuts Insufficient.

Production from the largest crude-oil producers, Saudi Arabia and Russia, will likely need to decline much more and stay down to offset rapidly increasing U.S. and Canada liquid-fuels supply. On a 12-month basis, Saudi Arabia and Russia crude production is the highest ever, based on our analysis of Bloomberg and Energy Intelligence Group data. Recent cuts have basically reduced last year's excess. Our graphic indicates Saudi and Russian production will need to decline to near 2009 levels in the coming years to offset increasing North American production.

In 2014, Saudi and Russian production averaged almost 20.5 million barrels per day (Mbpd) vs. 18.5 for the U.S. and Canada. DOE estimates put U.S. and Canada production about 9 mbpd higher at 2020-end, yet Saudi and Russian current production is 1 mbpd above 2014.

### Saudi, Russia Production Needs to Decline More



## PERFORMANCE DRIVERS

### Energy Downside Risks Outweigh Upside Potential.

WTI crude oil's 43% rally from 2018's low to 2019's peak is about as good as its price will get this year. Absent unexpected geopolitical issues, we believe WTI needs additional support from a rallying stock market to sustain above \$60, a level that marked the halfway point of 4Q's plunge. OPEC and Russia production cuts have helped stabilize the market, but sustainable reductions should be necessary to offset North American supply, slowing global growth and increasing volatility in equities. Timing vs. the 2018 bottom (at year-end) is a primary reason for the 30% Bloomberg WTI Crude Oil Subindex total return in 1Q.

### Further Energy Sector Returns Should Be Limited

Security	Chg YTD %	Chg March	Chg QTD Pct	1Yr % Chg	2Yr % Chg
Bloomberg WTI Crude Oil Subind	+30.2%	+4.6%	+30.2%	-4.9%	19.5%
Bloomberg Unleaded Gasoline Su	+26.7%	+6.8%	+26.7%	-9.9%	6.4%
Bloomberg Petroleum Subindex T	+25.9%	+2.6%	+25.9%	-2.9%	22.8%
Bloomberg Brent Crude Subindex	+25.2%	+1.9%	+25.2%	+1.1%	31.9%
Bloomberg Heating Oil Subindex	+19.3%	-2.3%	+19.3%	+9%	28.9%
BBG Energy Spot	+17.6%	+4%	+17.6%	-4.0%	12.0%
Bloomberg Energy Subindex Tota	+15.9%	+7%	+15.9%	-5%	9.3%
Bloomberg Natural Gas Subindex	-7.9%	-5.5%	-7.9%	-1.3%	-29.5%

Natural gas has returned to good support following last year's gamma-squeeze rally, but re-entered a range of \$2.70-\$4 a MMBtu.

### Front Energy Futures to March 29

Ticker	Last	Chg YTD %	Chg MTD %	Chg QTD %	1 Yr Ago	2 Yrs Ago	Chg Change 1Yr 2 Year Percent
+ Generic 1st 'XB' Future	188.3	+42.2%	+15.5%	+42.2%	201.8	170.0	-6.7% 12.6%
+ Generic 1st 'CL' Future	60.1	+32.4%	+5.1%	+32.4%	64.9	50.6	-7.4% 21.5%
+ Generic 1st 'CO' Future	67.6	+25.6%	+2.3%	+25.6%	70.3	52.8	-3.8% 28.9%
+ Generic 1st 'HO' Future	197.1	+17.3%	-2.6%	+17.3%	202.8	157.4	-2.8% 27.8%
+ Generic 1st 'NG' Future	2.7	-9.5%	-5.3%	-9.5%	2.7	3.2	-2.6% -16.2%

## Metals

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

Performance: March -0.4%, 2019 +6.7%

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

Performance: March +0.9%, 2019 +12.8%, Spot +12.4%

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

Performance: March -2.0%, 2019 0.0%, Spot +0.3%

## Two Markets, Both Gaining Favor

**A Tale of Two Metals Markets Favors Both Industrial, Precious.** Industrial metals will stay atop the leader board with a recovering stock market, yet we see overall metals as well-positioned when U.S. equities stop outperforming the rest of the world. This dynamic shines longer-term favor on the Bloomberg All Metals Index as a lofty dollar is the primary remaining headwind, particularly for precious metals. With futures priced for Federal Reserve easing, healthy U.S. stocks are the final pillar of support for the dollar. Gold-pressure factors at the end of 1Q -- the bursting palladium bubble and declining stock-market volatility -- should be temporary.

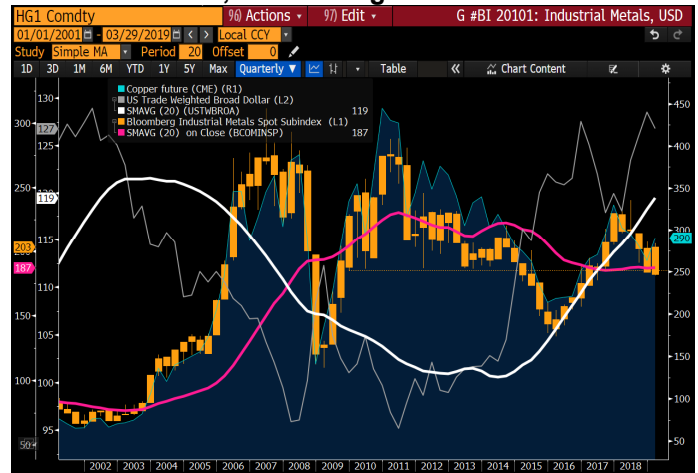
Our quarterly analysis shows industrial and precious metals in the early days of recovery. Palladium's rally is done, potentially in a similar fashion as in 2001 when it peaked close to \$1,100 an ounce, a likely first target for support.

### Base Metals Making Turn Higher

**Industrial Metals Making the Turn Higher Despite a Strong Dollar.** The end of 1Q leaves industrial metals in a favorable position, in our view, particularly vs. the still-strong dollar and the U.S. stock market. The 20-quarter average of the Bloomberg Industrial Metals Spot Subindex looks similar to the 2003 bear-to-bull shift.

**Industrial Metals Bull: A Refreshing Dip.** Industrial metals are showing divergent strength, making a turn higher on a quarterly basis despite the strong dollar. Our graphic depicts the 20-quarter average of the Bloomberg Industrial Metals Spot Subindex looking a lot like 2003's bear-to-bull transition with a peak greenback. A key difference is the trade-weighted broad dollar topped in 2002. If the greenback is peaking, it's only been one quarter, yet metals have held above the 20-quarter average since 3Q17.

### Base Metals Bull, Not Waiting for a Weak Dollar



Industrial metals are 0.68 negatively correlated to the dollar, about the same as the positive relationship to the Bloomberg Commodity Index, as measured annually over the past 20 years.

### Copper Bull Just Waiting on a Peak Greenback.

Copper is poised to outperform the S&P 500, notably if the greenback breaches support, which is primarily underpinned by U.S. equities in our view. Up about the same -- 40% -- in this rate hike cycle, the nascent copper bull appears in a better risk vs. reward position than the extended S&P 500 total return. A key indicator is the Bloomberg Dollar Index -- it has returned to initial support near its 52-week mean. If the greenback breaches support, copper and the metals, notably gold, should be primary beneficiaries.

### Copper Set to Take Bull Baton From U.S. Stocks



Copper typically suffers when equities decline, but would gain buoyancy from a weaker greenback. With the Federal Reserve shifting away from further hikes, a prime catalyst for dollar weakness is a decline in the U.S. stock

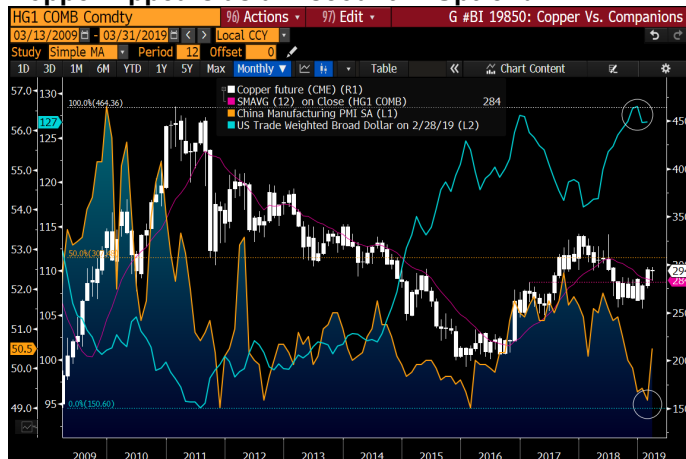
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market. It's basically a last dollar pillar with futures markets priced for rate cuts.

**Plenty of Support for Copper Prices.** Copper has a strong foundation for further price gains, in our view. Six months of consolidation from August to January provides a strong base, centered around \$2.72 a pound vs. \$2.94 on March 29, with its key companions pointing favorably. Mean-reversion potential in a top copper companion -- China's purchasing managers' index (PMI), which is near a decade low -- far outweighs downside risks. Similar conditions exist in the trade-weighted broad dollar, a leading negatively correlated companion. Dollar-mean-reversion risks from the 16-year high at the end of 2018 outweigh appreciation potential.

### Copper Appears as a Discount in Uptrend

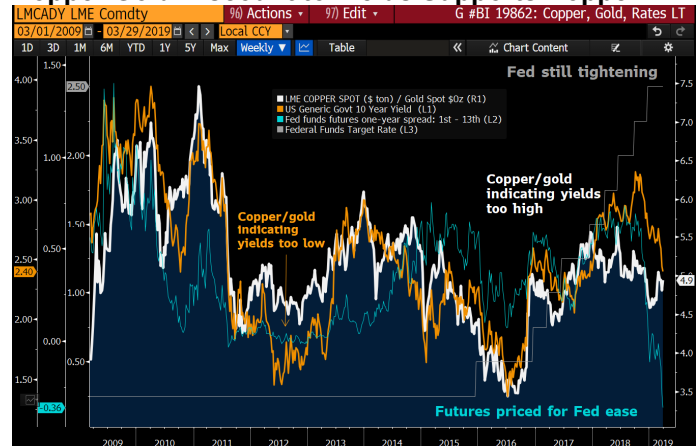


Copper's recovery above its 12-month average near \$2.84 in February appears to be anticipating companion support. Copper is 0.92 correlated to China PMI and minus 0.70 to the dollar, measured annually in the past 20 years.

**Narrowing the Yield Gap Favors Copper.** The greatest disparity in the copper-to-gold ratio vs. 10-year Treasury yields in six years supports higher copper prices, in our view. In 2012, copper-to-gold didn't decline as the 10-year yield dipped to 1.39%; they both peaked as the yield recovered toward 1.69% by December 2013. Declining copper-to-gold last year indicated the rally to 3.24% was too extreme. Continuing to narrow the gap between the highly correlated measures supports higher copper prices. A key disparity now is that futures are priced for Fed easing despite the rate-hike trend.

With 260-day volatility in copper about double that of gold, copper has been the primary driver of the ratio between the metals. Risks of reversal in the relationship driver are elevated though, with gold volatility about the lowest in two decades.

### Copper/Gold Discount to Yields Supports Copper



### Precious Metals Still Resting

**Gold's Lack of a Pulse Indicates a Longer Nap Until Peak Dollar.** Stuck close to \$1,300 an ounce in 1Q, gold is set to head for resistance at \$1,400 instead of continuing to consolidate and revisit \$1,200. It's been six years since gold traded above \$1,400 vs. just a few months ago when it was below \$1,200, yet headwinds are dropping fast, with a lofty dollar the primary remaining holdout.

**Gold Marking Time in 1Q Favors 2Q.** Gold looks similar to 2002, when it shifted to a bull market as the dollar peaked. Our graphic depicts the metal showing comfort above its 20-quarter average as the gauge appears to be turning from bear to bull. A peak in the trade-weighted broad dollar should seal a gold recovery, more so than in 2017. Then, stock-market volatility was still declining toward multidecade lows while rates and yields were on the rise. The opposite conditions are in place now, with a strong dollar the final pillar for gold.

### Gold Making Bull Turn vs. Dollar Opposite



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Bloomberg Commodity Index (BCOM)

The dollar's final base of support is the U.S. stock-market outperformance vs. the rest of the world.

**Gold Is Set to Breach Resistance.** Gold is warming to breach the upper end of its caged range. A primary difference this time vs. past failures is that futures have shifted to expectations of a Fed easing in the aftermath 2018's failed gold-bear raid. Managed-money positions on CME-traded gold futures reached the most net short in October, as a percentage of open interest in the database since 2006. In an environment of historically low volatility, such an extreme is a prime candidate for forming a longer-term price bottom. Seemingly unstoppable exchange-traded fund (ETF) inflows indicate endorsement of higher prices.

## Top-of-the-Cage Resistance May Be Short Term



In this the rate-hike cycle, gold ETF holdings have increased 55% (in ounces) vs. just 22% for the spot price. Gold ETF holdings are 0.84 correlated to the price the past 10 years measured annually.

**Gold Time Correction Favors Rally Resumption.** The unlikely is necessary for gold not to resume the rally it began about two decades ago, in our view. Gold is in a similar extreme coiled-spring condition as in 1997, but with the dollar at multiyear highs such as in 2002. Unless the greenback can manage further appreciation, gold should, which is what we expect. Dollar mean-reversion risks outweigh potential further upside, notably as rate-hike expectations have shifted to ease in the futures market.

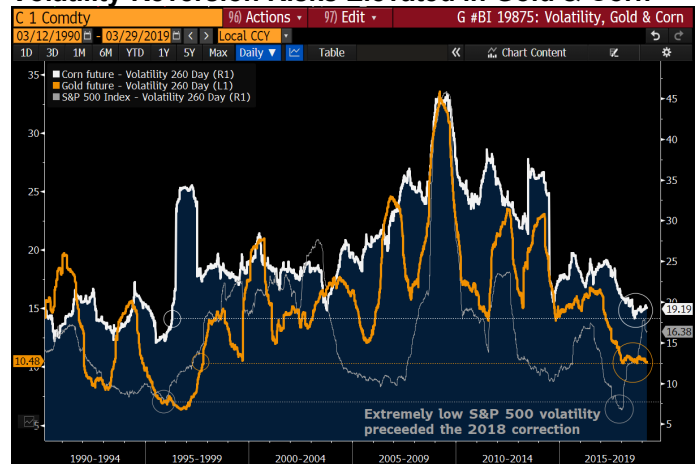
The narrowest for longest gold 60-month Bollinger Bands since 1997 is an indication of how compressed the market is and of potential fuel for a breakout. Unchanged since June 2013, gold's sixth year of consolidation can be considered an extended time correction of the bull market since 2002.

## Well Rested Gold Bull Just Waiting on the Dollar



**Explosion Risks Elevated in Gold and Corn.** Market volatility can stay low for extended periods but eventually reach such an extreme level of complacency that minor catalysts can spark big moves, and gold and corn are prime candidates. Our graphic depicts the lowest-for-longest 260-day volatility since 1997 for gold and 1996 for corn. Similar conditions for the S&P 500 at the beginning of 2018 resulted in the most significant correction (20%) in seven years. In 2017, the narrowest natural gas annual range since futures began trading in 1989 led to a 41% spike in November 2018.

## Volatility-Reversion Risks Elevated in Gold & Corn



These sharp negative gamma-related moves from 2018 have fully reversed, after flushing plenty of weak positions. Traders, options positions and algorithms can become complacent selling rallies and calls, as in natural gas, or puts, as in equities, in low- and declining-volatility environments.

## Metals Bull Getting Game On With Fed Catch-Up.

Precious metals are set to be primary beneficiaries of the Fed catching up to futures expectations for easing. The dollar is a primary connection. Likely in the early days of

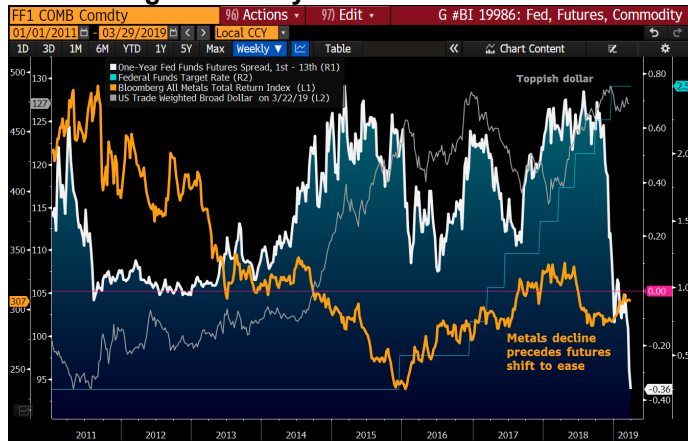


# Bloomberg Commodity Outlook – April 2019 Edition

## Bloomberg Commodity Index (BCOM)

backing away from 2018's 16-year high, the trade-weighted measure, which rallied 20% in the two-year run-up to the first rate hike this cycle, has plenty of mean-reversion room. It's unlikely a coincidence that the dollar peaked with the Dec. 19 interest-rate increase. A week later, futures indicated easing would be the next move.

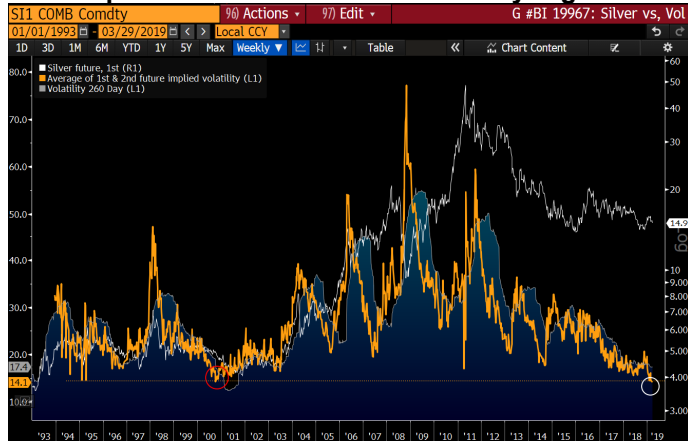
### Diminishing Dichotomy - Rate Hikes vs. Market Ease



To shift back to hikes, strong indications of inflation are required, which should be led by higher industrial-metals prices. If futures are right and rate cuts are next, a peak dollar is likelier, supporting gold and precious metals. The correlation between metals and the dollar is one of the most negative.

**Silver-Options Complacency as Low as It Gets.** Priced for the least amount of movement in futures options history, the risk of a silver-price surge is elevated, in our view. Our graphic depicts the lowest-for-longest implied volatility since 1993. The trend in prices and volatility has been down, but at such extremes, the risks of a potential sharp reversal and longer-term bottom outweigh the continuing rewards for responsive sellers of the market and calls. When commodities reach such extremes, up is typically the path of least resistance.

### Short Options Premium Risks Are Rarely Higher

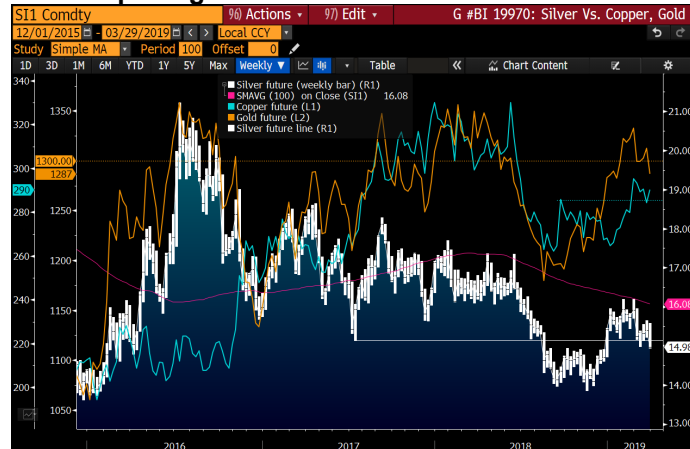


Options-implied volatility reflects the premium for price optionality in the underlying futures. Call-premium sellers have been the primary beneficiaries for about eight years. Conditions that have resulted in historically low volatility typically need to end to reverse the trend.

### Silver-Bull Options Improving on Copper, Gold.

Gold and copper showing comfort above widely watched resistance levels leaves little room for silver to go but higher, if history is a guide. The quasi-currency, often considered "leveraged gold" and that's produced mostly as a byproduct of other metals (yet is over 50% used industrially), is often guided by its primary companions. Recoveries in gold and copper indicate silver is ripe to breach 100-week average resistance for the first time in over a year. An additional foundation is 2018's failed bear raid.

### Silver Ripening to Breach 100-Week Resistance



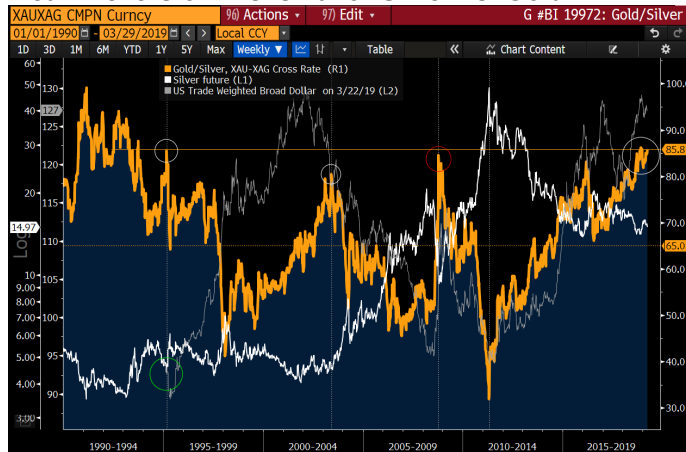
Silver is 0.77 correlated to gold and 0.71 to copper in the past 20 years, measured annually. Silver's beta to both metals is about 1.4. Indicating the extent of complacency, silver exchange-traded-fund holdings (in ounces) are up about 5% since the start of the current rate-hike cycle, vs. 56% for gold.

### Silver Downside vs. Gold Is Limited.

Silver, the primary driver of its ratio vs. gold, is set to prevail, with the relationship potentially peaking from a 25-year high. With annual volatility that's almost double gold's, silver is 0.78 negatively correlated to the ratio vs. only 0.08 for gold, measured annually. Our graphic depicts the limited room for silver to decline vs. gold, with the ratio at levels last seen in 1993. The mean figure since then is about 65, vs. the current 85 ounces of silver per one of gold.

With gold unchanged, revisiting the mean would imply a silver price near \$20 an ounce vs. \$15.50 on March 20, about a 30% advance. A peak in the dollar is a potential catalyst for boosting silver vs. gold. Commodities often find demand and less supply when prices are low, and vice versa when they're relatively high.

**Mean-Reversion Risks Favor Silver vs. Gold**



**PERFORMANCE DRIVERS**

**Metals Gaining Reward vs. Risk to Stock Market.** Top performers in 1Q, industrial metals are vulnerable to an extended stock market, but the broad metals sector is poised to outperform, in our view. The dollar is the primary connection and is supported by dominant U.S. equities. Once that ends, tailwinds should pick up for metals, the most negatively dollar-correlated commodity sector. The Bloomberg All Metals Total Return close to 7% in 1Q has a good foundation, especially if the 2018 dollar rally was the last gasp.

**Strong Base Metals Gain Support When Peak Dollar**

Security	Chg YTD %	Chg March	Chg QTD	1Yr %	2Yr %
Bloomberg Nickel Subindex Tota	+21.5%	-5%	+21.5%	-2.5%	28.0%
Bloomberg Zinc Subindex Total	+20.6%	+6.1%	+20.6%	-4.4%	14.5%
Bloomberg Industrial Metals Su	+12.8%	+9%	+12.8%	-3.1%	9.2%
Bloomberg Copper Subindex Tota	+12.0%	-2%	+12.0%	-3.6%	8.0%
Bloomberg Aluminum Subindex To	+3.2%	-2%	+3.2%	-2.5%	-2.5%
Bloomberg Gold Subindex Total	+9%	-1.6%	+9%	-2.8%	2.2%
Bloomberg Precious Metals Subi	--	-2.0%	--	-4.0%	-3.5%
Bloomberg All Metals Total Ret	-6%	+4%	+6.7%	-3.2%	3.7%
US Trade Wgt Broad Dollar Indx	-6%	+4%	-6%	+7.6%	2.4%
Bloomberg Silver Subindex Tota	-2.8%	-3.2%	-2.8%	-7.9%	-18.9%

Gold and silver are best positioned to recover when the dollar peaks, notably silver as primary companion copper appears to be in a nascent bull market. Nickel and zinc, more closely associated with increasing demand from rapidly advancing technology, complete the remaining notch of our favorable metal bias.

**Agriculture** (Index weight: 30% of BCOM)  
 Performance: March -2.2%, 2019 -3.2%, Spot -2.5%)

**Grains** (Index Weight: 24% of BCOM)  
 Performance: March -2.6%, 2019 -5.8%, Spot -5.0%)

**Softs** (Weight: 6% of BCOM)  
 Performance: March -0.7%, 2019 +0.4, Spot +0.8%)

**Elevated Complacency Risks**

**Complacency Over Unusual Run of High Yields Supports Ag Prices.** Elevated net-short positions and historically low Corn Belt production-season risk premiums support short-term prices, adding to indications of a longer-term bottom in agriculture, in our view. The lowest implied volatility in grain options in our 25-year database indicates the level of complacency in continuing a trend of record-setting yields. Absent the most favorable growing conditions, 2018's grain-price recovery should accelerate. Mean-reversion risks in the elevated dollar and stocks-to-use favor price appreciation vs. further downside.

Swine flu is supporting livestock and indicative of normalization risks in strong production trends in agriculture and mean-reversion risks in pricing. Top-performing lean hogs have recovered some lost ground as the grains await U.S.-China trade negotiations.

**Ripening Grain Rally Risks**

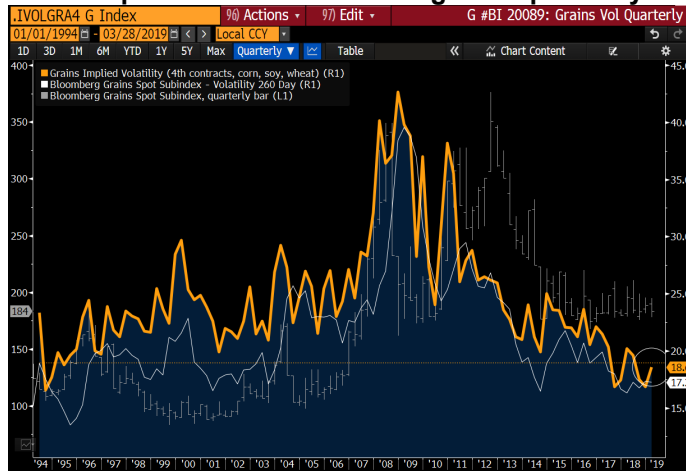
**What, Me Worry? Extreme Complacency Is Grain-Price Supportive.** It's prudent to be cautious when markets are priced for very little risk (as happened at the end of 3Q), which is grain-price supportive. Historically compressed pricing, very low options prices, record corn shorts and limited further pressure from stocks-to-use and the Brazilian real greet the Corn Belt sowing season.

**Extreme Production Complacency Raises Rally Risks.** The least amount of Corn Belt planting-season risk premium in the market in 25 years elevates the prospect of grain-price upside, in our view. Since 1994, our measure of the average of options-implied volatility for the fourth contracts for corn, soybeans and wheat has never been lower at the end of March. It's about 19% vs. 20% a year ago and the previous low (19.8%) at the end of 1Q95. A primary difference from the latter is 260-day actual volatility on the Bloomberg Grains Subindex was near 16% vs. 17.5% now.

# Bloomberg Commodity Outlook – April 2019 Edition

## Bloomberg Commodity Index (BCOM)

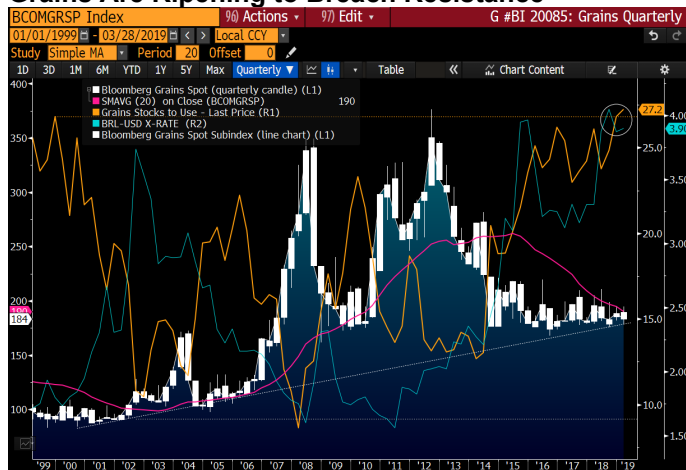
### Buried Options Prices Indicate High Complacency



Actual market volatility is higher than in 1995, though still historically low. Yet the cost of price-movement insurance, as measured by options volatility, is the lowest ever. The grains rallied more than 70% from 1Q95 to the peak in 2Q96.

**Grains' Coiled-Spring Risks Favor the Upside.** Mean-reversion risks in primary grain-price drivers elevate the potential for a sharp rally, in our view. Corn, soybeans and wheat may continue to drift sideways or lower, but the eventual upside risks are potentially explosive. Our graphic depicts the extreme narrowing wedge pattern of the Bloomberg Grains Spot Subindex, hovering at trend-line support with stocks-to-use and the Brazilian real-to-dollar exchange rate at multiyear highs. Our analysis of the average of corn, soybeans and wheat stocks-to-use from the USDA is the highest since 1989 on a quarterly basis, led by the beans.

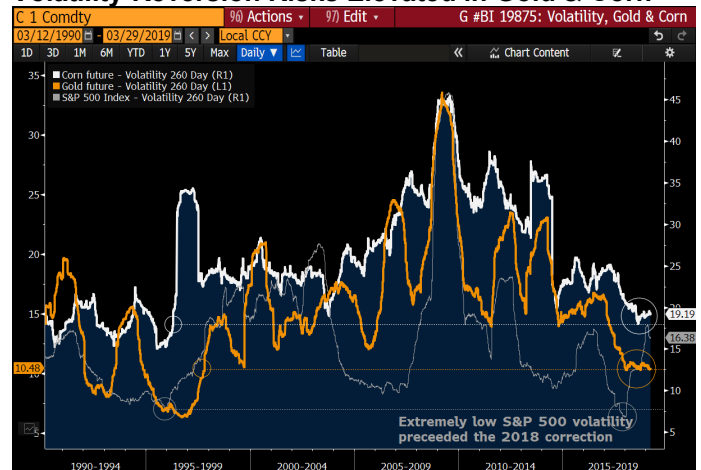
### Grains Are Ripening to Breach Resistance



Multiyear highs in the trade-weighted broad dollar near the end of 2018 were likely a last gasp. Mean reversion in

the dollar and stocks should have an outsized benefit, boosting the grain index above 20-quarter resistance. **Explosion Risks Elevated in Gold and Corn.** Market volatility can stay low for extended periods but eventually reach such an extreme level of complacency that minor catalysts can spark big moves, and gold and corn are prime candidates. Our graphic depicts the lowest-for-longest 260-day volatility since 1997 for gold and 1996 for corn. Similar conditions for the S&P 500 at the beginning of 2018 resulted in the most significant correction (20%) in seven years. In 2017, the narrowest natural gas annual range since futures began trading in 1989 led to a 41% spike in November 2018.

### Volatility-Reversion Risks Elevated in Gold & Corn



These sharp negative gamma-related moves from 2018 have fully reversed, after flushing plenty of weak positions. Traders, options positions and algorithms can become complacent selling rallies and calls, as in natural gas, or puts, as in equities, in low- and declining-volatility environments.

### Shorts Indicate \$4.00 Corn

**Hedge Funds Set to Pop Corn Toward \$4.40 Resistance From 2016.** Record net shorts in corn is a foundation sufficient to revisit resistance near \$4.40, in our view. Farmers are due to prevail vs. record short hedge funds that are apparently positioned for virtually no weather premium. A primary negative gamma-risk market this year, corn's upside potential exceeds downside risks with stocks-to-use in decline.

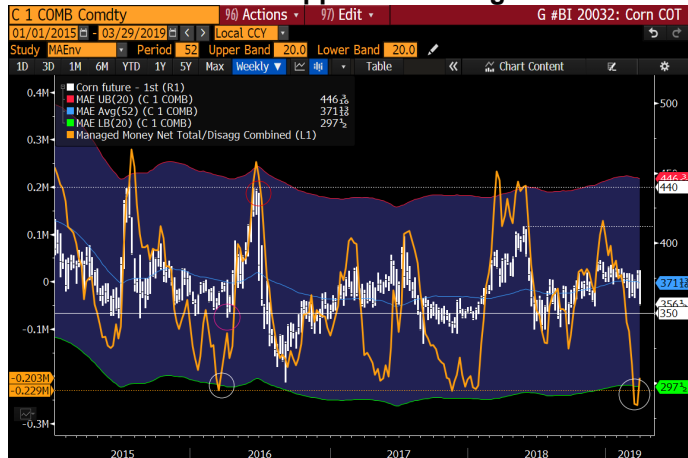
**Elevated Short-Covering Risks Should Lift Corn.** Corn is ripe to revisit resistance levels last traded in 2015-16, near \$4.40 a bushel, in our view. Spring prices are higher than they were then, with managed money net positions the most short in the database (2006) and stocks-to-use in decline. Pricing in some summer weather-risk premium should be enough to revisit \$4 in the front contract, vs.

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Bloomberg Commodity Index (BCOM)

\$3.79 on March 25. Declining stocks indicate that a bit of normalization in favorable weather and production trends should be sufficient to sustain above \$4.40.

## Record Corn Shorts Support Revisiting Resistance



Corn planted acres are expected to increase this year in the Corn Belt -- hedge funds appear positioned for a lot more. The narrowest 24-month Bollinger Bands in five decades indicate plenty of trend fuel. Corn for December delivery is near \$4. Our indications favor it heading toward \$5 vs. \$3.

**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.

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

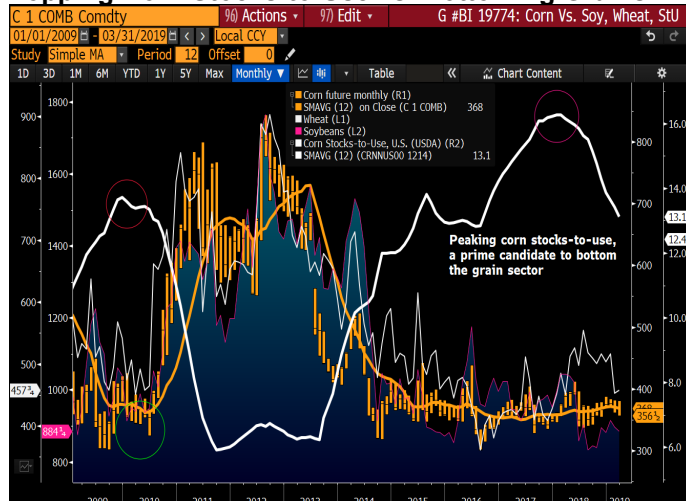


Gamma is the rate of change of delta, which is the underlying position in the market from an option. Short call strategies have been profitable since the price peak in 2012. We believe shorts are at greater risk of getting stopped out than longs.

## Peaking Corn Stocks-to-Use to Mark Grain Bottom.

The most significant potential peak in corn stocks-to-use in almost a decade should mark a grain-price bottom, in our view. It's been since 2009 that USDA estimates of U.S. corn stockpiles declined at a velocity similar to 2018. It may be more significant that the peak in the primary negatively correlated price measure comes despite another year of record yields. An inflection point of demand surpassing supply is the indication. More planted acres are expected, but may be insufficient to end the bullish indication for prices in declining stocks-to-use.

## Topping Corn Stocks-to-Use vs. Bottoming Grains



A handout at the All Day Ag Outlook highlighted the distinction -- soybean stocks-to-use are the highest in the 20-year data set vs. corn, which is at the lowest in four years. The USDA corn yield per harvested acre estimate of 179 bushels in 2018 is the greatest ever.

## PERFORMANCE DRIVERS

**Strong Livestock Set to Trickle Up to Broad Ags.** Lean hogs are an early indicator of the broader agriculture market's reversion potential to a higher mean. Up about 34% in 2019, lean-hog futures are second only to unleaded gas on this year's commodity leader board, yet remain below the halfway mark of the 2014-16 range. Back toward unchanged vs. the end of 2014, hogs have simply recovered lost ground.

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### Swine Flu in China, Not Trade, Boosts Livestock

Security	Chg YTD %	Chg March	Chg QTD Pct	1Yr % Chg	2Yr % Chg
Bloomberg Lean Hogs Subindex T	+6.8%	+23.7%	+6.6%	+6.5%	5.1%
Bloomberg Cotton Subindex Tota	+6.2%	+6.8%	+6.2%	-4.0%	2.7%
Bloomberg Sugar Subindex Total	+5.8%	-1.8%	+5.8%	-4.8%	-32.2%
Bloomberg Livestock Subindex T	+4.7%	+6.3%	+4.7%	+14.4%	9.3%
Bloomberg Live Cattle Subindex	+2.4%	-1.9%	+2.4%	+17.2%	9.0%
Bloomberg Soybean Oil Subindex	+1.3%	-6.1%	+1.3%	-14.4%	-16.4%
BBG Softs TR	+4%	-7%	+4%	-13.2%	-30.5%
BBG Soybean Meal TR	-1.8%	+4%	-1.8%	-22.2%	-9.4%
Bloomberg Soybeans Subindex To	-2.1%	-2.7%	-2.1%	-19.9%	-15.0%
Bloomberg Agriculture Subindex	-3.2%	-2.2%	-3.2%	-16.3%	-20.8%
Bloomberg Grains Spot Subindex	-5.0%	-2.8%	-5.0%	-8.6%	-1.5%
Bloomberg Grains Subindex Tota	-5.8%	-2.6%	-5.8%	-16.9%	-19.9%
Bloomberg Corn Subindex Total	-6.3%	-3.7%	-6.3%	-17.8%	-22.7%
Bloomberg Wheat Subindex Total	-9.0%	-2%	-9.0%	-8.7%	-19.0%
Bloomberg Coffee Subindex Tota	-9.5%	-3.8%	-9.5%	-28.0%	-44.2%
Bloomberg Kansas Wheat Subinde	-12.6%	-3.1%	-12.6%	-20.4%	-26.4%

Last year's top agriculture performer, wheat, has succumbed to some back-and-fill. It's likely to revisit the upper end of its recovery range, near \$5.50 a bushel in Chicago wheat, in our view. Entering the prime Corn Belt growing season should keep the grains in the ag-sector driver's seat, set for recovery on the back of reversion from 2018's near-perfect storm for lower prices.

# Bloomberg Commodity Outlook – April 2019 Edition

Bloomberg Commodity Index (BCOM)

## DATA on BI COMD

### Performance - Overview

#### Key Metrics

Name	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	0.3	6.3	6.3	-5.3	-1.7	8.0	-36.9
Energy Index	1.8	15.9	15.9	-0.5	9.3	28.2	-59.2
All Metals Index	0.2	6.7	6.7	-3.2	3.7	20.5	-2.5
Industrial Metals Index	0.8	12.8	12.8	-3.1	9.2	37.6	0.3
Precious Metals Index	-0.5	0.0	0.0	-4.0	-3.5	2.0	-8.9
Ags & Livestock Index	-1.0	-1.8	-1.8	-11.7	-16.3	-18.4	-44.2
Livestock Index	6.2	4.7	4.7	14.4	9.3	3.2	-19.4
Agriculture Index	-2.4	-3.2	-3.2	-16.3	-20.8	-22.4	-48.4
Grains Index	-2.8	-5.8	-5.8	-16.9	-19.9	-26.3	-53.5
Softs Index	-0.7	-0.6	0.4	-13.2	-30.5	-25.0	-50.3
BCOM EX Indices TR							
BCOM Index Roll Select TR	0.0	5.7	5.7	-6.5	-2.4	10.3	-31.9
BCOM Index Forwards TR							
BCOM Index ER	0.1	5.7	5.7	-7.3	-5.0	4.0	-39.3
BCOM Index Spot	0.4	7.4	7.4	-4.1	3.7	24.3	-18.7
<b>Stocks</b>							
S&P 500 Index TR	1.2	13.6	13.6	9.5	24.8	45.3	66.6
<b>Bonds</b>							
Barclays U.S. Aggregate	2.1	2.9	2.9	4.5	5.7	6.2	14.6
<b>Currencies</b>							
Bloomberg U.S. Dollar Spot Index	0.7	0.0	0.2	6.5	-1.7	0.9	17.9
US Dollar Index	1.2	0.9	1.2	7.9	-2.7	2.2	21.3
US Trade Weighted Broad Dollar	0.4	-1.2	-0.6	7.6	2.4	6.0	23.1

#### Historical

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Commodities</b>										
BCOM Index TR	6.3%	-11.2%	1.7%	11.8%	-24.7%	-17.0%	-9.5%	-1.1%	-13.3%	16.8%
Energy Index	15.6%	-12.7%	-4.3%	16.3%	-38.9%	-39.3%	5.2%	-9.4%	-16.0%	-10.5%
All Metals Index	5.6%	-12.6%	20.8%	15.7%	-19.5%	-7.1%	-21.6%	2.9%	-11.5%	25.9%
Industrial Metals Index	11.1%	-19.5%	29.4%	19.9%	-26.9%	-6.9%	-13.6%	0.7%	-24.2%	16.2%
Precious Metals Index	-0.4%	-4.6%	10.9%	9.5%	-11.5%	-6.7%	-30.8%	6.3%	4.6%	42.7%
Ags & Livestock Index	-0.5%	-9.4%	-8.1%	0.9%	-16.1%	-6.0%	-12.6%	2.7%	-12.4%	33.9%
Livestock Index	6.6%	-1.7%	6.4%	-5.6%	-18.8%	11.6%	-3.5%	-3.5%	-2.3%	9.3%
Agriculture Index	-2.0%	-10.8%	-11.0%	2.1%	-15.6%	-9.2%	-14.3%	4.0%	-14.4%	38.5%
Grains Index	-3.5%	-5.5%	-11.3%	-5.9%	-19.4%	-9.4%	-16.9%	18.3%	-14.4%	30.3%
Softs Index	-0.3%	-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	5.7%	-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	5.7%	-13.0%	0.7%	11.4%	-24.7%	-17.0%	-9.6%	-1.1%	-13.4%	16.7%
BCOM Index Spot	7.4%	-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	12.9%	-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	3.0%	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	0.2%	3.1%	-8.5%	2.8%	9.0%	11.0%	3.3%	-0.7%	1.8%	-1.8%
US Dollar Index	1.0%	4.4%	-9.9%	3.6%	9.3%	12.8%	0.3%	-0.5%	1.5%	1.5%
US Trade Weighted Broad Dollar	-1.3%	7.2%	-6.0%	4.5%	10.7%	8.4%	2.8%	-1.4%	0.7%	-1.3%

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### Performance – Commodity Total Returns

#### Key Metrics

Name	MTD % Change	3 Mth % Change	YTD % Change	1Y Yr % Change	2Y Yr % Change
<b>▼ BCOM Total Return Indices</b>					
Live Cattle Index	-1.9	2.4	2.4	17.2	9.0
Lean Hogs Index	23.7	6.8	6.8	6.5	5.1
Brent Crude Index	1.9	25.2	25.2	1.1	31.9
Heating Oil Index	-2.3	19.3	19.3	0.9	28.9
Natural Gas Index	-5.5	-7.9	-7.9	-1.3	-29.5
Nickel Index	-0.5	21.5	21.5	-2.5	28.0
Aluminum Index	-0.2	3.2	3.2	-2.5	-2.5
Gold Index	-1.6	0.9	0.9	-2.8	2.2
Copper Index	-0.2	12.0	12.0	-3.6	8.0
Cotton Index	6.8	6.2	6.2	-4.0	2.7
Zinc Index	6.1	20.6	20.6	-4.4	14.5
Sugar Index	-1.8	5.8	5.8	-4.8	-32.2
WTI Crude Index	4.6	30.2	30.2	-4.9	19.5
Silver Index	-3.2	-2.8	-2.8	-7.9	-18.9
Platinum Index	-2.9	6.6	6.6	-8.5	-10.9
Wheat Index	-0.2	-9.0	-9.0	-8.7	-19.0
Gasoline Index	6.8	26.7	26.7	-9.9	6.4
Soybean Oil Index	-6.1	1.3	1.3	-14.4	-16.4
Corn Index	-3.7	-6.3	-6.3	-17.8	-22.7
Soybeans Index	-2.7	-2.1	-2.1	-19.9	-15.0
HRW Wheat Index	-3.1	-12.6	-12.6	-20.4	-26.4
Soybean Meal Index	0.4	-2.7	-1.8	-22.2	-9.4
Coffee Index	-3.8	-9.5	-9.5	-28.0	-44.2

#### Historical

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>▼ BCOM Total Return Indices</b>										
WTI Crude Index	28.3%	-20.5%	5.1%	7.1%	-44.3%	-41.7%	6.8%	-11.8%	-3.6%	3.8%
Gasoline Index	25.4%	-28.3%	2.8%	6.4%	-12.6%	-43.8%	1.9%	25.7%	14.5%	13.1%
Brent Crude Index	24.4%	-14.9%	14.2%	25.4%	-45.6%	-47.6%	7.2%	7.6%	16.8%	11.5%
Nickel Index	20.5%	-16.4%	25.6%	11.8%	-42.6%	7.3%	-20.1%	-10.2%	-24.7%	32.2%
Heating Oil Index	19.3%	-15.7%	15.0%	33.5%	-42.8%	-38.8%	0.4%	5.5%	10.7%	8.3%
Zinc Index	18.1%	-21.4%	29.7%	57.5%	-28.0%	3.5%	-7.0%	9.0%	-27.8%	-8.8%
Lean Hogs Index	10.8%	-11.0%	2.8%	-2.9%	-26.1%	-4.4%	-2.0%	-2.9%	-4.6%	0.3%
Copper Index	9.6%	-21.2%	29.2%	15.7%	-25.1%	-16.6%	-8.8%	5.0%	-24.4%	29.5%
Sugar Index	5.8%	-26.1%	-25.4%	22.8%	-4.7%	-30.9%	-20.0%	-13.0%	-11.9%	24.0%
Platinum Index	5.3%	-14.8%	3.0%	0.8%	-26.5%	-12.3%	-11.8%	8.7%	-21.8%	19.3%
Cotton Index	3.8%	-7.3%	12.5%	10.5%	3.0%	-21.2%	9.0%	-12.7%	-21.7%	98.2%
Live Cattle Index	2.9%	2.6%	9.1%	-7.4%	-14.3%	22.1%	-5.0%	-3.9%	-1.0%	15.0%
Aluminum Index	2.7%	-16.9%	31.2%	9.7%	-22.9%	-3.1%	-20.7%	-4.0%	-21.7%	5.4%
Soybean Oil Index	2.3%	-19.2%	-7.0%	7.3%	-7.7%	-20.6%	-22.4%	-9.8%	-15.2%	33.8%
Gold Index	0.7%	-2.8%	12.8%	7.7%	-10.9%	-1.7%	-28.7%	6.1%	9.6%	28.7%
Soybeans Index	-1.6%	-11.7%	-8.1%	14.8%	-14.6%	-5.5%	10.5%	24.0%	-16.4%	34.9%
Corn Index	-1.8%	-4.6%	-12.1%	-9.8%	-19.2%	-13.3%	-30.3%	19.0%	1.1%	30.7%
Soybean Meal Index	-1.8%	-4.4%	-4.8%	18.1%	-18.0%	11.8%	20.0%	49.1%	-18.1%	38.9%
Silver Index	-3.7%	-10.2%	5.8%	14.0%	-12.7%	-20.4%	-36.6%	7.1%	-10.1%	81.8%
Natural Gas Index	-6.2%	-0.1%	-36.4%	10.3%	-39.9%	-30.7%	5.0%	-30.6%	-47.1%	-40.6%
Wheat Index	-7.6%	3.5%	-12.5%	-24.1%	-22.2%	-9.4%	-27.2%	9.8%	-34.0%	21.2%
Coffee Index	-9.9%	-26.5%	-16.0%	-1.3%	-31.5%	37.8%	-30.5%	-41.6%	-11.2%	67.0%
HRW Wheat Index	-10.8%	-3.1%	-14.9%	-25.3%	-32.7%	-4.7%	-26.2%	5.6%	-22.9%	42.1%

# Bloomberg Commodity Outlook – April 2019 Edition

Bloomberg Commodity Index (BCOM)

## Performance – Prices

### Key Metrics

Name	1M	MTD % Change	3 Mth % Change	YTD % Change	1Y Yr % Change	2 Yr % Change
<b>▼ BCOM Single Commodity Price</b>						
Palladium	20	-12.4	13.4	12.1	42.2	69.8
Lean Hogs	5	45.5	34.1	33.4	42.1	24.5
Live Cattle	1	-8.4	-4.2	-3.9	4.6	-1.9
Wheat	0	1.2	-10.5	-9.0	1.5	7.6
Sugar	00	-1.6	1.1	4.2	1.5	-26.8
Gold	00	-1.3	1.2	1.3	-1.8	3.6
Gas Oil	10	-2.8	23.1	18.9	-2.0	30.9
Nickel	00	-0.3	21.4	21.9	-2.3	29.5
Natural Gas	0	-5.3	-19.4	-9.5	-2.6	-16.2
Heating Oil	0	-2.6	18.4	17.3	-2.8	27.8
Copper (CME)	20	-0.5	9.5	11.6	-3.0	9.7
Copper (LME)	10	-0.7	8.2	8.8	-3.0	10.0
Brent Crude	0	2.3	29.5	25.6	-3.8	28.9
Aluminum	00	0.3	4.4	4.3	-4.5	-2.7
Cotton	20	8.2	7.5	7.5	-4.7	1.9
Gasoline	1	15.5	41.9	42.2	-6.7	12.6
Silver	00	-2.8	-2.1	-2.8	-7.1	-17.2
WTI Crude	10	5.1	32.7	32.4	-7.4	21.5
Platinum	10	-2.4	8.2	7.3	-7.9	-10.3
HRW Wheat	0	-2.5	-13.3	-12.0	-8.0	1.5
Corn	0	-1.5	-5.1	-4.9	-8.1	-0.6
Zinc	2	5.3	20.2	19.0	-10.0	3.7
Soybean Oil	0	-5.3	3.1	2.9	-11.0	-12.0
Soybeans	0	-1.5	0.2	0.2	-15.4	-8.7
Coffee	00	-0.7	-6.4	-7.2	-20.0	-32.2
Soybean Meal	00	1.4	-0.8	0.1	-20.2	-2.9

## Historical

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>▼ BCOM Single Commodity Price</b>										
Gasoline	43.4%	-26.4%	8.1%	31.4%	-11.7%	-48.5%	-0.9%	4.7%	9.5%	19.5%
WTI Crude	31.8%	-24.8%	12.5%	45.0%	-30.5%	-45.9%	7.2%	-7.1%	8.2%	15.1%
Lean Hogs	27.6%	-15.0%	8.5%	10.6%	-26.4%	-4.9%	-0.3%	1.7%	5.7%	22.3%
Brent Crude	27.0%	-19.5%	17.7%	52.4%	-35.0%	-48.3%	-0.3%	3.5%	13.3%	21.6%
Nickel	20.7%	-16.5%	27.5%	13.5%	-41.8%	9.0%	-18.6%	-9.2%	-24.2%	33.8%
Gas Oil	18.2%	-14.9%	19.8%	53.6%	-36.3%	-45.8%	1.9%	0.3%	21.2%	20.0%
Heating Oil	17.2%	-19.0%	21.8%	54.8%	-40.4%	-40.0%	1.1%	3.8%	15.4%	20.1%
Zinc	17.2%	-25.6%	30.1%	60.2%	-26.2%	6.0%	-0.5%	12.2%	-25.2%	-3.5%
Palladium	13.2%	12.8%	55.3%	21.6%	-29.6%	11.2%	2.1%	7.2%	-18.3%	96.5%
Copper (CME)	11.5%	-20.3%	31.7%	17.4%	-24.4%	-16.8%	-7.0%	6.3%	-22.7%	32.9%
Platinum	6.8%	-14.8%	3.6%	1.1%	-26.2%	-11.8%	-10.9%	9.9%	-21.1%	21.5%
Copper (LME)	6.8%	-17.4%	30.6%	17.3%	-25.8%	-13.9%	-6.8%	4.2%	-21.2%	31.2%
Cotton	6.3%	-8.2%	11.3%	11.6%	5.0%	-28.8%	12.6%	-18.1%	-36.6%	91.5%
Sugar	4.4%	-20.6%	-22.3%	28.0%	5.0%	-11.5%	-15.9%	-16.3%	-27.5%	19.2%
Aluminum	3.9%	-19.3%	33.3%	12.5%	-17.9%	4.1%	-13.9%	2.5%	-18.8%	11.6%
Soybean Oil	3.6%	-16.7%	-3.9%	12.7%	-4.4%	-17.6%	-21.0%	-5.6%	-9.8%	43.1%
Live Cattle	2.1%	1.9%	4.7%	-15.2%	-16.4%	21.5%	1.8%	8.9%	12.1%	25.9%
Gold	1.2%	-2.1%	13.7%	8.6%	-10.5%	-1.5%	-28.3%	7.0%	10.2%	29.7%
Soybeans	1.0%	-7.3%	-4.5%	14.4%	-14.5%	-22.3%	-7.5%	18.4%	-14.0%	34.0%
Soybean Meal	0.3%	-2.0%	-0.1%	18.4%	-27.5%	-16.7%	4.1%	35.9%	-16.4%	18.0%
Corn	-0.5%	6.9%	-0.4%	-1.9%	-9.6%	-5.9%	-39.6%	8.0%	2.8%	51.7%
Silver	-2.6%	-9.4%	7.2%	15.8%	-11.5%	-19.5%	-35.9%	8.3%	-9.8%	83.7%
Coffee	-6.8%	-19.3%	-7.9%	8.2%	-23.9%	50.5%	-23.0%	-36.6%	-5.7%	76.9%
Wheat	-8.5%	17.9%	4.7%	-13.2%	-20.3%	-2.6%	-22.2%	19.2%	-17.8%	46.7%
Natural Gas	-8.7%	-0.4%	-20.7%	59.3%	-19.1%	-31.7%	26.2%	12.1%	-32.1%	-20.9%
HRW Wheat	-11.6%	14.4%	2.1%	-10.7%	-25.2%	-2.2%	-22.9%	15.9%	-15.7%	58.7%



# Bloomberg Commodity Outlook – April 2019 Edition

Bloomberg Commodity Index (BCOM)

## Performance – Volatility

Name	Current	% Change o... Day	WTD % Change	MTD % Change	1 Mth % Change	3 Mth % Change	YTD % Change	1 Yr % Change	2 Yr % Change	3 Yr % Change	5 Yr % Change
▼ BCOM 3M Implied Volatility											
Lean Hogs	37.5	-1.0	-11.5	33.8	33.8	31.6	32.0	51.3	46.7	94.5	66.2
Palladium	31.1	13.3	23.2	-2.8	-2.8	19.5	18.9	39.9	41.4	9.1	25.0
Coffee	27.7	-0.7	3.7	5.4	5.4	9.2	8.3	32.5	-5.2	-9.6	-36.9
Nickel	27.0	16.3	2.6	-1.7	-1.7	-10.1	-9.9	-11.5	-1.7	-46.1	2.9
Brent Crude	26.3	-1.6	-6.4	-9.0	-9.0	-40.0	-38.4	9.2	-11.0	-35.9	62.0
Unlead Gas	26.2	-1.7	-3.5	-9.2	-9.2	-37.0	-31.2	12.3	-2.4	-36.0	44.7
Crude Oil	25.9	-1.5	-7.5	-9.5	-9.5	-44.6	-46.4	11.1	-11.9	-35.9	50.5
Heating Oil	23.3	-0.8	-3.1	-7.3	-7.3	-38.4	-35.5	4.4	-12.8	-40.7	46.7
Gas Oil	23.2	-6.0	0.4	-8.8	-8.8	-45.2	-46.3	3.5	-19.9	-40.6	52.1
Sugar	21.9	-1.4	-6.1	-4.0	-4.0	-0.8	1.3	-8.0	-17.0	-31.1	-15.8
HRW Wheat	21.1	-6.7	-15.1	-9.9	-9.9	7.0	6.8	-12.6	-8.1	-14.7	-26.4
Wheat	20.5	-7.9	-14.5	-7.1	-7.1	6.0	8.1	-9.1	-14.3	-18.2	-33.8
NaturalGas	20.3	1.3	-1.9	-0.7	-0.7	-36.2	-40.2	-8.0	-40.6	-49.4	-31.7
Zinc	19.7	-23.8	-38.1	-6.6	-6.6	-19.2	-19.2	-7.2	-25.1	-42.7	8.2
Cotton	18.9	0.1	-4.9	-1.9	-1.9	-5.2	-4.6	-7.4	-3.5	-5.8	-26.7
Aluminum	17.5	2.0	-2.2	9.9	9.9	-22.1	-8.5	-3.3	14.4	-1.2	9.7
Corn	17.0	-7.8	-15.1	11.0	11.0	10.7	8.9	-21.3	-26.9	-28.6	-43.7
Copper (COMEX)	16.4	3.2	-0.8	-2.3	-2.3	-13.0	-8.5	-4.5	-7.1	-24.7	-22.5
Platinum	16.2	-0.3	-1.6	0.1	0.1	-5.3	-6.0	21.4	-1.9	-30.4	-14.1
Copper (LME)	15.2	1.6	-18.8	-6.5	-6.5	-17.0	-23.3	-18.9	-22.1	-32.1	-20.5
Silver	14.6	0.9	-1.9	-3.1	-3.1	-26.7	-25.7	-9.7	-25.6	-41.5	-43.1
Live Cattle	14.2	-0.4	-25.1	15.1	15.1	12.2	10.9	-27.7	-20.6	-17.0	63.5
Soybean Meal	14.1	-3.0	-4.2	-0.5	-0.5	-4.8	-3.5	-40.8	-35.7	-29.0	-41.1
Soybean Oil	13.4	-2.5	-8.0	-4.7	-4.7	-7.6	-6.2	-10.5	-39.5	-32.5	-29.8
Soybeans	12.7	-3.7	-4.8	-3.2	-3.2	-7.8	-6.3	-24.1	-27.7	-25.0	-37.7
Gold	9.0	-2.0	-6.2	4.2	4.2	-25.4	-27.2	-9.3	-24.0	-42.4	-44.3
▼ BCOM 60 Day Historical Volatility											
Natural Gas	56.9	0.2	-12.7	-26.1	-26.1	-34.2	-36.7	22.0	28.7	18.6	-23.3
Lean Hogs	41.4	0.7	2.7	-10.8	-10.8	-31.2	-31.2	61.8	56.5	75.4	38.1
Palladium	33.7	1.0	34.8	27.6	27.6	25.3	25.3	24.9	9.9	-9.7	129.8
Unlead Gas	33.7	-0.3	1.2	-20.5	-20.5	-22.0	-22.1	25.5	-3.6	-53.6	42.8
Crude Oil	26.9	0.1	-4.6	-36.2	-36.2	-41.0	-41.1	17.4	5.9	-61.4	61.5
Sugar	26.7	-1.4	-4.5	-2.2	-2.2	14.8	13.7	-10.0	6.9	-30.5	-18.5
Live Cattle	25.4	-1.0	-0.5	2.6	2.6	0.3	-0.3	-13.8	7.5	47.7	66.6
HRW Wheat	25.4	-1.0	-0.5	2.6	2.6	0.3	-0.3	-13.8	7.5	16.6	-0.2
Wheat	25.2	-0.3	-0.7	19.5	19.5	9.7	8.7	-9.5	-1.4	28.4	-13.1
Coffee	24.6	-2.5	-4.5	-18.4	-18.4	-35.0	-34.7	30.7	17.8	-16.6	-54.9
Nickel Gas	23.6	0.1	-0.9	3.1	3.1	16.4	17.6	-23.3	-22.7	-38.0	13.4
Brent Crude	23.2	0.1	-5.2	-41.0	-41.0	-46.6	-47.5	7.3	-4.6	-63.2	76.2
Zinc	21.1	-1.5	-5.9	-1.8	-1.8	-18.8	-19.1	3.1	-12.0	-32.8	29.1
Platinum	20.5	0.5	3.0	9.4	9.4	14.5	13.9	27.5	10.6	-26.1	59.6
Gas Oil	20.5	-3.1	-10.2	-33.0	-33.0	-33.0	-35.6	2.1	-6.3	-65.2	46.5
Heating Oil	20.0	-2.5	-8.8	-31.3	-31.3	-35.2	-35.5	-0.3	-14.3	-65.1	-20.4
Cotton	20.0	2.6	1.2	-0.1	-0.1	-14.0	-13.9	-2.8	20.1	13.0	-2.3
Aluminum	18.7	-0.1	-7.4	-5.3	-5.3	21.7	24.4	-1.7	31.3	6.7	8.3
Copper (CME)	18.0	-0.9	-5.2	-12.9	-12.9	-11.7	-13.1	-5.9	-20.4	-19.8	20.6
Corn	18.0	19.0	20.5	33.0	33.0	27.6	27.6	32.2	9.4	46.5	-12.5
Silver	15.2	-0.1	0.4	3.3	3.3	-17.4	-17.5	-16.3	-9.6	-46.7	-32.8
Copper (LME)	14.1	3.8	-13.9	-17.0	-17.0	-18.8	-16.8	-24.6	-37.3	-35.6	-15.2
Soybean Oil	13.8	0.0	-0.6	-2.5	-2.5	-11.5	-11.2	0.2	-30.5	-17.8	-21.8
Soybean Meal	13.6	-0.4	1.0	17.3	17.3	-21.3	-18.4	-40.8	-35.0	-11.7	-39.9
Soybeans	12.3	-0.1	-2.1	-3.0	-3.0	-31.6	-31.0	-17.2	-27.2	5.1	-26.2
Gold	10.0	-1.4	6.0	15.3	15.3	-11.8	-11.8	-14.9	-8.8	-50.4	-29.1

# Bloomberg Commodity Outlook – April 2019 Edition

Bloomberg Commodity Index (BCOM)

## 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	-3.6	-3.3	-0.3	1.4	1.4	1.4	0.7	-1.0
Sector								
Livestock	2.6	-8.4	11.0	4.3	12.7	12.7	3.3	-2.1
Energy	0.2	5.1	-4.8	2.4	0.1	0.1	0.7	1.1
Industrial Metals	-0.5	-1.4	0.9	0.7	0.2	0.2	0.7	0.8
Precious Metals	-3.1	-3.1	0.0	0.0	0.1	0.1	0.0	-1.2
Agriculture	-8.9	-7.4	-1.5	0.0	0.9	0.9	-0.2	-3.0
Single Commodities								
Zinc	5.7	1.9	3.8	2.3	1.2	1.2	2.1	5.7
Brent Crude	3.6	7.0	-3.3	6.7	1.8	1.8	6.6	4.8
Natural Gas	3.3	3.6	-0.4	5.2	-3.2	-3.2	-3.4	-8.0
Live Cattle	2.7	1.2	1.5	-2.4	-4.5	-4.5	-4.2	-8.4
Palladium	2.5	1.3	1.2	-1.6	-1.5	-1.5	-1.7	2.8
Unleaded Gas	2.4	3.3	-0.9	5.6	4.2	4.2	2.6	0.9
Lean Hogs	2.4	-18.0	20.4	11.0	29.8	29.8	10.8	4.2
Crude Oil	1.8	8.1	-6.3	8.8	4.1	4.1	7.4	4.8
Cotton	1.6	4.3	-2.7	4.5	5.5	5.5	4.4	-1.5
Copper (LME)	0.0	-1.8	1.8	0.0	-0.2	-0.2	0.0	0.7
Copper (CME)	-0.7	-2.9	2.2	0.0	-0.3	-0.3	-0.2	1.5
Heating Oil	-1.7	2.3	-4.0	1.7	-0.3	-0.3	2.0	2.7
Platinum	-1.8	-2.0	0.2	0.2	-0.1	-0.1	0.3	-0.6
Gas Oil	-2.1	4.2	-6.3	1.9	-2.3	-2.3	3.0	1.2
Nickel	-2.5	-1.6	-0.9	0.7	-0.2	-0.2	0.6	-0.2
Gold	-2.7	-2.7	0.0	0.2	0.1	0.1	0.2	-1.1
Silver	-3.5	-3.5	0.0	-0.2	0.1	0.1	-0.1	-1.2
Soybean Meal	-3.8	6.9	-10.7	1.4	1.5	1.5	1.5	-3.3
Aluminum	-4.7	-2.5	-2.3	0.6	0.2	0.2	1.0	-3.6
Thermal Coal	-5.7	7.1	-12.8	-13.3	-3.5	-3.5	-13.3	
Soybean	-6.1	0.0	-6.1	1.1	0.7	0.7	1.1	-5.1
Soybean Oil	-7.0	-4.9	-2.1	-0.8	-1.1	-1.1	-0.9	-3.8
Wheat	-10.0	-17.7	7.7	-0.1	1.4	1.4	-0.5	6.9
Sugar	-10.9	-16.2	5.3	-1.6	0.6	0.6	-2.5	-6.8
Corn	-13.2	-8.9	-4.3	-4.7	-1.9	-1.9	-4.9	-2.4
HRW Wheat	-15.8	-18.0	2.2	-2.3	-2.9	-2.9	-2.6	2.0
Coffee	-16.2	-11.3	-4.9	-0.2	0.8	0.8	-0.1	-6.6

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	-3.5	-5.0	-1.7	-2.2	-7.1	-4.4	0.3	-0.9	-2.0	2.3
Sector										
Livestock	2.0	-1.7	6.5	8.1	0.6	8.3	4.1	-0.7	-0.2	-1.8
Energy	0.2	-2.2	4.3	0.4	-14.0	-11.3	3.5	-1.3	-2.5	-2.1
Industrial Metals	-0.6	-1.2	-0.8	-0.8	-1.5	-0.8	-1.8	-2.5	-2.1	0.5
Precious Metals	-3.1	-3.1	-2.3	-1.7	-1.0	-0.8	-0.7	-0.7	-0.7	-0.9
Agriculture	-8.9	-8.9	-5.9	-4.2	-5.5	-5.6	-1.5	-2.3	-1.8	12.2
Single Commodities										
Zinc	5.1	3.4	3.4	0.2	-2.8	-1.4	-2.3	-4.5	-3.9	-1.7
Natural Gas	4.8	-2.0	-3.7	-0.1	-22.6	-22.2	-3.2	-20.7	-29.9	-18.4
Brent Crude	4.3	-3.1	6.3	-3.1	-22.1	-16.4	4.9	6.3	4.0	-0.4
Unleaded Gas	3.9	-3.2	4.7	2.8	1.0	-12.3	7.0	9.8	7.9	3.7
Live Cattle	3.0	5.2	6.3	13.3	8.1	7.0	2.5	-3.3	-4.5	-3.8
Palladium	2.6	4.1	1.5	-0.5	-0.2	-0.1	-0.5	-0.2	-0.4	0.0
Crude Oil	1.1	-7.1	5.0	-5.9	-20.4	-13.5	7.3	-1.3	1.4	-3.2
Lean Hogs	1.0	-8.6	6.7	2.9	-7.0	9.6	5.7	2.0	4.2	0.2
Cotton	0.1	-2.9	6.1	1.7	-2.7	-8.6	6.7	-5.7	3.6	34.6
Copper (LME)	-0.1	0.0	-1.3	-0.3	0.3	1.6	1.1	-0.7	-0.3	2.7
Copper (CME)	-0.9	-0.8	-1.8	-0.8	-1.1	-0.2	1.3	-1.1	-0.8	2.5
Platinum	-1.9	-2.0	-1.4	-1.1	-0.4	-0.4	-0.5	-0.7	-1.0	-0.5
Heating Oil	-2.1	-3.4	5.9	-4.5	-24.5	-4.5	3.2	2.1	2.1	-3.4
Gas Oil	-2.1	-4.0	6.2	-4.8	-23.8	-12.0	3.1	2.9	3.0	-4.2
Nickel	-2.5	-3.1	-2.0	-1.9	-1.4	-1.1	-1.8	-1.4	-0.1	1.1
Gold	-2.7	-2.9	-2.2	-1.5	-0.5	-0.3	-0.4	-0.7	-0.9	-0.9
Silver	-3.5	-3.3	-2.5	-2.0	-1.4	-1.2	-0.9	-0.7	-0.5	-0.9
Soybean Meal	-3.8	-5.3	-3.4	-0.4	-5.7	9.8	19.9	12.5	-2.4	9.9
Aluminum	-4.5	-5.3	-2.3	-1.0	-2.7	-3.1	-7.5	-5.0	-5.2	-2.3
Soybean	-5.9	-7.2	-3.3	0.4	-2.0	0.9	13.1	7.7	-1.2	5.9
Soybean Oil	-6.8	-6.2	-1.1	-1.2	-3.1	-0.9	-3.8	-2.8	-1.6	-0.9
Thermal Coal	-8.2	7.5	5.4	18.4	14.0	1.7	1.9	-8.3	-6.2	11.2
Wheat	-10.3	-10.0	-15.5	-17.1	-10.5	-5.0	-7.2	-6.9	-12.4	-8.7
Sugar	-10.5	-9.3	-3.5	4.8	0.9	-13.1	-8.2	-5.5	-0.3	26.0
Corn	-10.6	-8.5	-12.1	-10.5	-9.5	-8.1	-9.2	12.7	7.2	9.4
HRW Wheat	-15.3	-13.5	-19.1	-16.1	-14.9	-6.3	-5.5	-5.7	-7.9	-3.1
Coffee	-16.5	-16.0	-10.9	-9.2	-8.4	-7.4	-11.2	-11.5	-4.9	6.1

# Bloomberg Commodity Outlook – April 2019 Edition

Bloomberg Commodity Index (BCOM)

## 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	3.5	-0.1	-6.2	9.7	-23.6	27.0
BCOM Industrial Metals	1.3	0.8	-1.8	3.0	-1.8	3.1
BCOM Precious Metals	-0.7	-0.8	-0.4	-0.3	-0.8	0.1
BCOM	-1.1	-2.7	-4.4	3.3	-9.8	8.7
BCOM Livestock	-2.7	-0.9	-0.7	-2.0	6.0	-8.6
BCOM Softs	-5.4	-4.5	-3.1	-2.3	-6.2	0.8
BCOM Grains	-8.3	-10.3	-10.8	2.5	-5.9	-2.4
BCOM Agriculture		-7.4	-8.0			
<b>▼ Commodities Roll Yield</b>						
Gas Oil	5.4	8.5	1.6	3.8	-10.2	15.6
Zinc	5.0	3.0	0.3	4.6	-3.3	8.3
Brent Crude	5.0	11.0	-0.8	5.8	-18.8	23.7
Heating Oil	3.7	5.1	-2.1	5.8	-14.9	18.6
Crude Oil	2.5	5.5	-4.9	7.4	-21.4	23.9
Aluminum	2.0	2.9	-2.3	4.3	-3.3	5.3
Natural Gas	1.3	-11.6	-14.7	16.0	-44.8	46.1
Cotton	0.7	4.1	1.6	-0.9	-2.8	3.5
Nickel	0.0	-1.2	-2.7	2.7	-1.5	1.5
Platinum	-0.1	0.7	-0.3	0.2	-1.0	0.9
Gold	-0.6	-0.4	0.0	-0.6	-0.9	0.4
Copper (CME)	-0.6	-0.6	-2.1	1.5	-1.9	1.3
Silver	-0.8	0.1	-1.0	0.2	-2.0	1.2
Soybean Meal	-2.0	-3.3	-5.1	3.1	-2.2	0.2
Unlead Gas	-3.2	2.5	-1.4	-1.8	-13.8	10.5
Soybean Oil	-3.3	-2.5	-2.0	-1.3	-4.7	1.3
Soybean	-4.6	-4.9	-3.6	-1.0	-1.8	-2.7
Sugar	-6.2	-10.9	-1.2	-5.0	-4.8	-1.4
Coffee	-7.9	-6.6	-7.3	-0.6	-9.1	1.1
Corn	-9.7	-12.5	-12.3	2.5	-8.3	-1.4
Wheat	-10.2	-14.4	-16.1	5.9	-12.8	2.6
HRW Wheat	-12.4	-14.8	-17.1	4.6	-15.2	2.8
Lean Hogs	-28.6	-13.6	10.4	-39.0	-10.8	-17.8

Measured on a gross roll yield basis; the 251 business day difference between the total return and spot change.

### 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	2.7	3.6	-7.7	-32.5	-12.6	1.6	-5.1	-11.7	-11.0	-13.8
BCOM Industrial Metals	1.0	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 Livestock	-2.7	1.8	0.5	0.2	1.1	-0.2	-4.5	-9.8	-12.3	-14.8
BCOM Softs	-5.4	-4.5	-4.2	-5.6	-7.4	-12.5	-4.9	0.9	9.0	0.5
BCOM Agriculture	-7.3	-7.1	-8.0	-6.1	-4.1	-1.0	4.9	1.9	-1.9	-9.6
BCOM Grains	-8.5	-10.1	-10.7	-7.0	-4.7	0.7	8.2	3.6	-5.8	-12.6
<b>▼ Commodities Roll Yield</b>										
Zinc	5.3	4.2	-3.1	-2.7	-2.5	-4.6	-8.8	-3.1	-3.0	-5.3
Gas Oil	5.0	3.9	-0.9	-22.7	-11.0	-1.6	2.1	7.4	2.1	-12.3
Heating Oil	3.6	3.4	-6.4	-25.3	-3.0	1.1	-1.3	1.0	-2.9	-11.7
Aluminum	2.9	2.4	-3.2	-2.9	-6.0	-9.1	-8.4	-6.2	-3.3	-6.0
Brent Crude	2.9	4.7	-4.9	-27.7	-23.3	0.3	6.9	4.2	8.3	-12.5
Crude Oil	2.1	4.4	-7.3	-38.2	-14.0	4.3	-0.3	-4.5	-9.7	-11.3
Natural Gas	1.1	0.3	-14.0	-52.6	-19.8	0.8	-22.3	-42.7	-13.8	-16.1
Cotton	-0.1	0.9	1.0	-1.1	-2.1	7.7	-3.6	5.2	15.5	14.3
Platinum	-0.5	0.0	-1.1	-0.4	-0.2	-0.5	-0.8	-1.2	0.9	-2.7
Gold	-0.6	-0.7	-0.3	-0.9	-0.4	-0.2	-0.4	-0.9	2.9	-1.0
Copper (CME)	-0.9	-1.0	-3.5	-1.6	-0.7	0.3	-1.7	-1.3	-0.1	-3.6
Silver	-1.0	-0.8	0.1	-1.8	-1.2	-0.9	-0.7	-1.1	4.5	-5.1
Nickel	-1.3	0.1	-0.6	-1.7	0.5	-2.9	-2.3	-1.0	-1.7	-1.6
Soybean Meal	-2.1	-2.3	-4.8	-0.5	9.6	28.7	16.5	13.0	-1.3	20.7
Soybean Oil	-4.1	-2.5	-2.9	-5.4	-3.2	-2.9	-1.3	-4.2	-4.2	-8.5
Unlead Gas	-4.3	-0.6	-4.0	-27.2	1.1	4.7	1.3	18.9	4.5	-6.9
Live Cattle	-5.6	0.6	4.4	7.8	2.0	0.6	-6.8	-12.8	-12.5	-12.2
Soybean	-6.8	-4.4	-3.0	0.2	-0.2	17.0	18.5	5.5	-1.8	0.5
Sugar	-7.4	-5.4	-3.2	-5.2	-9.9	-19.5	-4.1	3.1	18.7	4.6
Coffee	-8.2	-7.2	-9.2	-9.7	-7.8	-12.6	-7.2	-5.0	-3.4	-8.5
Wheat	-11.6	-14.3	-18.0	-10.9	-1.9	-7.0	-5.1	-9.4	-14.6	-23.8
Corn	-13.9	-11.5	-12.4	-7.9	-9.6	-7.4	9.4	10.8	0.4	-20.9
HRW Wheat	-14.0	-17.5	-17.8	-14.7	-7.6	-2.5	-3.3	-4.1	-7.6	-9.9
Lean Hogs	-28.1	4.1	-8.2	-13.6	0.3	0.6	-1.7	-4.5	-9.6	-23.8

**Bloomberg Commodity Outlook – April 2019 Edition**  
*Bloomberg Commodity Index (BCOM)*

**Curve Analysis – Forwards / Forecasts**  
**Spread %**

Name	3/2019	2/2019	1/2019	12/2018	11/2018	10/2018	9/2018	8/2018	7/2018	6/2018	5/2018	4/2018
<b>1 Yr Spread ((Forward-Forecast)/ Forecast</b>												
<b>Energy</b>												
Natural Gas Spread %	-4.4	-2.6										
WTI Crude Spread %	-1.9	-3.3	-8.9	-2.8	-3.1	-0.9	2.4	1.2	2.6	6.1	4.3	7.3
Brent Crude Spread %	-2.5	-1.6	-8.0	-1.1	-1.8	1.3	4.1	3.8	5.7	7.1	8.9	9.8
ULS Diesel Spread %		-4.3	-12.6	-1.5	-0.8	1.7	2.2	1.1	0.2	8.4	9.6	6.1
Unleaded Gasoline Spread %	-2.5	-5.5	-17.4	-2.0	-1.8	-1.4	2.8	-0.1	-0.3	-0.1	1.4	3.5
<b>Soft</b>												
Sugar Spread %	-0.1	4.8	2.9	-3.0	-1.2	3.3	-3.6	-2.0	-5.8	-2.3	0.7	-6.2
Coffee Spread %	-11.0	-15.1	-10.3	-9.2	-5.8	-4.8	-6.8	-9.0	-5.6	-5.6	-2.5	-1.3
Cotton Spread %	-2.3	-5.7	-2.5	-1.2	-1.7	-2.8	-2.5	-1.9	3.1	-0.2	9.9	2.5
<b>Industrial Metals</b>												
Copper Spread % (LME)	-2.5	-0.9	-6.0	-0.8	-1.1	-1.9	-1.7	-3.4	-5.2	-2.9	-1.3	-2.5
Aluminum Spread %	-5.6	-4.8	-4.8	-0.8	-1.5	-1.5	-1.0	0.6	-0.4	0.2	3.9	3.3
Zinc Spread %	2.0	0.0	-2.2	-2.2	-2.5	-2.9	-4.9	-7.2	-7.3	-4.2	-0.4	-2.1
Nickel Spread %	-0.3	1.8	-1.7	-3.9	-3.8	-3.4	-3.1	-0.8	1.9	8.4	10.8	5.1
<b>Precious Metals</b>												
Gold Spread %	1.5	3.7	3.8	0.0	-0.5	-0.3	-1.7	-1.7	-2.5	-2.2	0.3	1.1
Silver Spread %	-4.7	-1.2	1.6	-1.2	-1.8	-2.4	-4.3	-4.5	-2.5	-4.1	-2.3	-2.6
<b>Grain</b>												
Corn Spread %	-1.1	-2.3	1.1	-1.2	-2.3	-3.2	-3.4	-5.1	-3.5	-5.9	2.4	4.4
Soybeans Spread %	-3.6	-3.3	-1.8	-2.7	-2.6	-3.4	-3.3	-5.4	-7.1	-8.0	0.6	2.6
Wheat Spread %	-5.3	-5.1	4.3	-0.7	-2.3	-2.5	-1.4	1.0	5.2	0.0	10.3	8.6

**Data Set**

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Data Set</b>										
<b>1 Yr Spread</b>										
<b>Energy</b>										
Natural Gas Forward	2.87	3.15	2.95	3.72	2.34	2.89	4.23	3.35	2.99	4.34
Natural Gas Forecast	3.00									
WTI Crude Forward	59.1	64.4	60.4	53.7	37.0	53.3	98.4	91.8	98.8	91.4
WTI Crude Forecast	60.3	66.3	50.6	43.2	50.0	93.6	98.2	95.0	94.0	79.0
Brent Crude Forward	65.9	71.7	66.9	56.8	37.3	57.3	110.8	111.1	107.4	94.8
Brent Crude Forecast	67.6	72.5	54.0	44.9	54.0	100.0	108.0	111.9	110.7	80.0
ULS Diesel Forward	1.99	2.09	2.08	1.70	1.10	1.85	3.08	3.05	2.94	2.54
ULS Diesel Forecast	2.12	2.13	1.56	1.34	1.69	2.79	2.98	3.05	2.87	2.13
Unleaded Gasoline Forward	1.72	1.93	1.80	1.67	1.27	1.44	2.79	2.81	2.69	2.45
Unleaded Gasoline Forecast	1.76	1.97	1.56	1.39	1.64	2.65	2.86	2.95	2.91	2.12
<b>Soft</b>										
Sugar Forward	0.13	0.12	0.15	0.20	0.15	0.15	0.16	0.20	0.23	0.32
Sugar Forecast	0.13	0.12	0.16	0.18	0.13	0.17	0.18	0.22	0.27	0.21
Coffee Forward	0.98	1.04	1.26	1.37	1.27	1.67	1.11	1.44	2.27	2.40
Coffee Forecast	1.10	1.15	1.35	1.37	1.34	1.79	1.26	1.78	2.53	1.60
Cotton Forward	0.75	0.81	0.79	0.71	0.63	0.60	0.85	0.75	0.92	1.45
Cotton Forecast	0.77	0.82	0.73	0.65	0.64	0.76	0.84	0.79	1.34	0.90
<b>Industrial Metals</b>										
Copper Forward (LME)	6,351	6,510	7,219	5,526	4,713	6,349	7,373	7,913	7,595	9,644
Copper Forecast (LME)	6,515	6,562	6,129	4,826	5,575	6,871	7,334	7,958	8,855	7,460
Aluminum Forward	1,906	2,113	2,258	1,694	1,506	1,834	1,762	2,047	1,997	2,459
Aluminum Forecast	2,020	2,130	1,968	1,600	1,693	1,883	1,883	2,038	2,450	2,167
Zinc Forward	2,813	2,860	3,335	2,564	1,600	2,168	2,045	2,055	1,831	2,447
Zinc Forecast	2,758	2,925	2,861	2,043	1,961	2,170	1,930	1,963	2,210	2,192
Nickel Forward	12,834	13,019	12,714	9,975	8,788	15,088	13,843	17,008	18,731	24,715
Nickel Forecast	12,875	13,552	10,322	9,594	12,170	17,000	15,124	17,602	22,997	21,814
<b>Precious Metals</b>										
Gold Forward	1,306	1,268	1,309	1,152	1,060	1,184	1,202	1,676	1,567	1,421
Gold Forecast	1,286	1,268	1,258	1,262	1,165	1,265	1,420	1,677	1,575	1,211
Silver Forward	15.26	15.60	17.15	15.99	13.80	15.57	19.34	30.17	27.88	30.91
Silver Forecast	16.00	15.78	17.13	17.11	15.84	19.10	24.00	31.40	35.50	19.68
Platinum Forecast	869	885	951	1,000	1,076	1,390	1,514	1,556	1,752	1,616
Palladium Forecast	1,246.9	1,000.0	855.0	616.6	700.0	803.0	734.0	643.0	733.0	520.0
<b>Grain</b>										
Corn Forward	3.8	3.7	3.5	3.5	3.6	4.0	4.2	7.0	6.5	6.3
Corn Forecast	3.9	3.7	3.6	3.6	3.8	4.1	5.9	7.0	6.9	4.9
Soybeans Forward	9.1	9.1	9.5	10.0	8.7	10.2	13.1	14.2	12.0	13.9
Soybeans Forecast	9.4	9.4	9.8	9.9	9.5	12.4	14.0	14.7	13.5	10.5
Wheat Forward	4.7	5.0	4.3	4.1	4.7	5.9	6.1	7.8	6.5	7.9
Wheat Forecast	5.0	5.0	4.4	4.4	5.1	5.8	6.9	7.5	7.4	6.2

# Bloomberg Commodity Outlook – April 2019 Edition

Bloomberg Commodity Index (BCOM)

## Market Flows – Open Interest

### Key Metrics

Name	Current	MTD % Change	3 Mth % Change	YTD % Change	1Q Yr % Change	2Q Yr % Change	2 Year High
▼ Open Interest (Aggregate - 1,000s)							
▼ Single Commodities							
Coffee	350	14.8	29.2	28.7	27.3	83.3	350
Live Cattle	444	9.1	22.7	20.0	24.4	14.4	455
Lean Hogs	284	12.3	36.5	34.6	19.8	38.5	285
HRW Wheat	333	15.6	14.8	13.7	18.5	35.4	342
Platinum	82	0.0	0.0	0.0	9.3	24.2	94
Corn	1,828	12.2	16.1	15.6	-0.6	27.6	2,007
Soybean Meal	457	5.1	5.1	6.5	-1.3	23.2	538
Wheat	494	8.1	14.4	13.6	-1.4	-2.8	581
Brent Crude	2,343	6.4	7.2	8.6	-3.1	-5.0	2,704
Zinc	179	7.8	24.3	26.1	-4.8	-7.7	225
Aluminum	460	-6.1	-1.5	-2.8	-5.5	-11.4	547
Nickel	153	0.0	10.1	9.3	-6.1	-4.4	188
Gas Oil	911	-1.9	12.1	11.5	-6.5	0.1	1,138
Sugar	910	9.5	4.5	3.9	-7.3	12.8	1,062
Soybean Oil	475	-2.7	0.0	-0.2	-8.0	18.8	606
Copper (LME)	155	-8.3	-3.1	-3.7	-11.4	-23.3	219
Soybean	726	13.1	7.4	9.3	-17.0	2.4	976
Cotton	228	3.2	7.0	7.0	-18.3	-19.2	322
Crude Oil	1,293	-9.3	-38.1	-38.1	-48.5	-41.8	2,714
Natural Gas	630	-19.3	-48.2	-48.2	-55.9	-53.8	1,700
Heating Oil	182	-27.5	-50.7	-50.7	-56.3	-56.6	491
Unlead Gas	170	-33.6	-58.3	-58.3	-60.8	-56.4	501
Copper (CME)	85	-61.2	-61.0	-61.0	-71.0	-68.9	338
Gold	129	0.0	-70.9	-70.9	-74.6	-71.3	598
Silver	32	-81.7	-81.6	-81.6	-85.9	-84.2	244
Palladium	3	-88.9	-88.5	-88.5	-87.5	-90.6	40

### Historical

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
▼ Open Interest (Aggregate - 1,000s)										
▶ BCOM	12,212	13,647	14,623	12,965	11,965	10,881	11,033	10,367	9,282	10,206
▼ Sector										
▶ Agriculture	5,803	5,239	5,168	4,493	4,563	4,211	4,090	3,876	3,418	4,399
▶ Energy	5,556	7,931	7,084	6,057	6,057	5,033	5,346	4,980	4,230	4,262
▶ Industrial Metals	1,029	1,134	1,354	1,319	1,178	1,224	1,104	1,006	1,159	1,105
▶ Livestock	729	581	572	501	431	481	591	578	552	534
▶ Precious Metals	247	724	786	667	673	620	613	658	585	783
▼ Single Commodities										
Brent Crude	2,369	2,158	2,322	2,159	2,031	1,513	1,443	1,285	886	873
Corn	1,822	1,582	1,540	1,236	1,334	1,237	1,203	1,128	1,151	1,549
Crude Oil	1,293	2,087	2,460	2,051	1,671	1,468	1,616	1,473	1,328	1,430
Sugar	918	876	753	805	879	836	830	754	559	613
Gas Oil	911	817	865	802	700	435	477	512	458	619
Soybean	725	664	705	632	646	599	576	546	460	629
Natural Gas	630	1,216	1,448	1,243	957	939	1,291	1,165	1,011	772
Wheat	495	435	523	448	368	371	411	456	384	492
Soybean Oil	479	476	444	372	384	355	340	306	273	358
Aluminum	459	473	520	541	551	595	539	495	682	546
Soybean Meal	457	429	376	329	402	341	262	212	194	192
Live Cattle	445	370	333	306	265	266	327	329	317	327
Coffee	348	272	218	191	172	160	142	144	105	140
HRW Wheat	333	293	330	239	193	132	154	158	139	219
Lean Hogs	284	211	239	194	166	215	264	248	235	207
Cotton	226	213	279	242	185	178	172	171	152	207
Heating Oil	182	369	449	429	342	346	279	263	269	301
Zinc	177	142	200	184	167	182	184	166	148	135
Unlead Gas	170	408	387	400	355	332	239	282	277	267
Copper (LME)	155	161	203	209	146	155	132	130	143	196
Nickel	153	140	150	160	148	132	81	69	65	61
Gold	129	443	472	416	415	372	380	428	419	585
Copper (CME)	85	218	280	224	166	160	167	147	121	167
Platinum	82	82	83	63	65	64	62	60	42	39
Silver	32	174	194	164	168	151	132	141	106	136
Palladium	3	26	37	24	24	33	39	29	18	23

# Bloomberg Commodity Outlook – April 2019 Edition

Bloomberg Commodity Index (BCOM)

## 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							
Live Cattle	148,945	3,786	26,788	62,686	62,686	100,186	29,563
Sugar	-92,694	7,372	-62,671	-53,322	-53,322	64,397	-149,111
Aluminum (Post- MiFID II)	150,045	0	-3,172	16,156	16,156	53,885	
Silver	12,261	2,267	-36,052	3,685	3,685	46,114	-69,340
Natural Gas	149,813	-13,445	39,886	-43,297	-43,297	30,711	256
Soybean Oil	-8,320	-18,696	-31,601	43,182	43,182	27,796	11,428
Lean Hogs	24,200	16,110	29,690	-539	-539	19,582	-14,314
Wheat	-63,753	9,753	-5,186	-46,749	-46,749	13,999	72,397
Nickel	42,230	-664	-1,792	12,113	13,772	5,041	22,602
Platinum	11,445	8,351	10,408	16,009	16,009	3,163	3,436
Gasoline	97,937	6,035	23,258	44,821	44,821	2,604	79,914
Palladium	12,536	-265	-1,896	-679	-679	824	-9,406
Copper (LME) (Post MiFID II)	26,715	0	-8,200	-3,793	-3,793	-6,017	
Zinc (Pre MiFID II)	79,906	-1,121	-6,682	3,640	-471	-8,898	44,606
Copper (CME)	-5,797	-15,694	-21,435	14,399	14,399	-9,521	-66,570
Aluminum (Pre- MiFID II)	163,475	6,307	-3,292	21,105	3,315	-10,481	115,362
Zinc (Post MiFID II)	58,918	0	8,777	22,406	22,406	-14,085	
Coffee	-78,056	-866	-5,902	-21,710	-21,710	-18,467	-76,464
Copper (LME) (Pre MiFID II)	37,448	-917	-16,651	-27,111	-31,597	-34,385	25,052
Heating Oil	-1,171	-4,694	-10,234	-3,547	-3,547	-51,804	-20,205
HRW Wheat	-48,488	2,892	-6,931	-50,923	-50,923	-75,369	-46,732
Cotton	573	11,391	21,597	-15,430	-15,430	-80,395	-104,869
Gold	79,757	22,011	-24,473	22,808	22,808	-93,077	-19,393
Soybean Meal	-12,063	17,782	36,553	-11,449	-11,449	-114,136	-41,596
WTI Crude	238,205	25,888	106,883	120,604	120,604	-229,810	-6,410
Soybeans	-51,394	12,598	-15,412	-40,849	-40,849	-234,972	-89,324
Brent Crude	322,035	13,429	30,699	159,786	159,786	-293,625	-50,721
Corn	-203,414	57,912	-98,955	-301,226	-301,226	-320,325	-47,902

### Historical

Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
▼ Net - Managed Money Total/Disagg										
BCOM	352,745.0	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	779,606.0	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
Livestock	153,249	110,998	136,667	147,051	24,525	117,295	137,611	110,898	104,018	133,520
Precious Metals	83,635	74,176	124,419	101,310	-239	153,310	70,026	171,032	134,710	232,650
Agriculture	-657,747	-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	308,606	162,249	561,284	454,585	163,672	115,571	136,611	125,397	81,537	
WTI Crude	212,317	117,601	411,972	307,909	100,797	199,388	270,386	134,834	192,466	217,046
Natural Gas	163,258	193,110	-52,446	174,043	-161,686	-53,308	134,994	-89,820	-124,269	-96,119
Aluminum (Post- MiFID II)	150,045	133,889								
Live Cattle	145,159	86,259	82,710	92,516	11,081	80,102	96,771	59,569	68,105	104,412
Gasoline	91,902	53,116	79,450	50,091	28,391	44,226	54,637	64,383	61,288	67,205
Zinc (Post MiFID II)	58,918	36,512								
Gold	57,746	56,949	109,919	41,247	-24,263	98,391	34,104	101,922	111,919	169,987
Copper (LME) (Post MiFID II)	26,715	30,508								
Palladium	12,801	13,215	25,815	12,742	8,690	19,970	15,660	16,769	5,212	13,034
Soybean Oil	10,376	-51,502	3,406	85,522	60,895	35,047	-46,649	-42,424	-2,103	56,961
Silver	9,994	8,576	-7,105	39,098	6,282	17,051	5,573	23,113	6,200	26,836
Copper (CME)	9,897	-20,196	99,520	72,131	-25,964	-4,455	35,635	14,988	-4,018	39,105
Lean Hogs	8,090	24,739	53,957	54,535	13,444	37,193	40,840	51,329	35,913	29,108
Heating Oil	3,523	2,376	81,824	33,541	-35,339	-27,087	26,602	23,945	19,644	36,104
Platinum	3,094	-4,564	-4,210	8,223	9,052	17,898	14,689	29,228	11,379	22,793
Cotton	-10,818	16,003	102,402	76,052	51,307	11,005	43,288	25,828	6,683	40,645
Soybean Meal	-29,845	-614	31,257	19,537	-40,843	54,132	57,931	41,489	-15,232	40,129
HRW Wheat	-51,380	2,435	-34,422	9,085	-14,975	24,999	8,022	23,619	9,128	49,108
Soybeans	-63,992	-10,545	-69,091	107,075	-63,515	39,446	136,683	109,007	23,683	164,287
Wheat	-73,506	-17,004	-145,735	-108,927	-83,120	20,481	-71,468	-11,899	-29,252	36,542
Coffee	-77,190	-56,346	-57,846	12,706	-15,181	25,385	-8,417	-23,076	2,905	36,182
Sugar	-100,066	-39,372	-73,056	138,442	165,810	-66,824	-25,626	19,000	43,792	141,534
Corn	-261,326	97,812	-206,624	-113,648	-136,111	239,704	-94,812	140,109	148,653	396,782
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				

## Bloomberg Commodity Outlook – April 2019 Edition

Bloomberg Commodity Index (BCOM)

### Market Flows – ETF Flows (quarterly)

Name	2019 Q1	2018 Q4	2018 Q3	2018 Q2	2018 Q1	2017 Q4	2017 Q3	2017 Q2	2017 Q1	2016 Q4
<b>▼ ETFs (\$ Billion AUM)</b>										
▼ Total ETF Assets Under Management (\$ ...)	136.09	134.23	128.65	144.47	145.78	141.70	137.83	133.41	131.00	119.26
▶ Precious Metals	110.21	109.28	97.77	107.55	112.61	109.98	107.61	103.09	101.15	90.02
▶ Broad Commodity	15.25	14.91	19.22	23.48	20.13	17.20	15.45	13.95	14.87	14.21
▶ Energy	7.60	7.02	8.58	9.78	9.25	11.10	11.46	13.20	11.83	12.20
▶ Agriculture	1.55	1.77	1.79	1.97	2.02	1.78	1.89	1.83	1.76	1.67
▶ Industrial Metals	1.48	1.22	1.28	1.68	1.75	1.63	1.41	1.33	1.39	1.15
▶ Livestock	0.02	0.02	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
<b>▼ ETFs Fund Flows (\$ Billion)</b>										
▼ Total ETF Fund Flows (\$ Billion)	-0.10	4.55	-7.83	2.80	1.23	-0.67	-1.07	4.67	5.80	-10.14
▶ Precious Metals	1.89	4.22	-3.81	1.51	1.68	0.39	1.74	2.43	4.04	-7.33
▶ Industrial Metals	0.13	0.06	-0.23	-0.10	0.23	0.04	-0.08	-0.07	0.15	0.11
▶ Livestock	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	0.00	0.02
▶ Agriculture	-0.01	-0.19	-0.05	0.03	0.12	-0.09	0.22	0.07	0.12	-0.10
▶ Broad Commodity	-0.67	-1.89	-2.55	2.50	2.24	0.82	0.29	-0.38	0.26	0.34
▶ Energy	-1.46	2.36	-1.19	-1.13	-3.04	-1.83	-3.23	2.63	1.23	-3.18
<b>DELTA WEIGHTED:</b>										
<b>▼ ETFs (\$ Billion AUM) (Dw)</b>										
▼ Total ETF Assets Under Management (\$ ...)	139.03	136.40	130.49	147.31	148.59	146.18	141.58	139.08	134.96	122.02
▶ Precious Metals	111.10	110.49	98.84	108.79	113.65	111.21	108.52	104.10	102.16	90.67
▶ Broad Commodity	15.54	15.28	19.49	23.76	20.40	17.44	15.66	14.15	15.04	14.23
▶ Energy	9.23	7.51	8.97	10.99	10.62	13.96	13.93	17.49	14.45	14.19
▶ Agriculture	1.63	1.85	1.87	2.06	2.12	1.90	2.03	1.96	1.87	1.75
▶ Industrial Metals	1.50	1.25	1.31	1.70	1.78	1.66	1.43	1.36	1.42	1.17
▶ Livestock	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.01
<b>▼ ETFs Fund Flows (\$ Billion) (Dw)</b>										
▼ Total ETF Fund Flows (\$ Billion)	-1.45	8.00	-8.63	1.11	-0.84	-1.12	-4.07	8.25	8.35	-12.81
▶ Precious Metals	1.68	4.10	-3.50	1.88	1.65	0.62	1.56	2.61	3.96	-6.90
▶ Industrial Metals	0.13	0.06	-0.21	-0.11	0.23	0.03	-0.09	-0.07	0.16	0.09
▶ Agriculture	0.01	-0.20	-0.03	0.02	0.07	-0.09	0.23	0.11	0.15	-0.09
▶ Livestock	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	0.00	0.02
▶ Broad Commodity	-0.77	-1.76	-2.55	2.51	2.27	0.83	0.27	-0.35	0.41	0.33
▶ Energy	-2.50	5.79	-2.34	-3.19	-5.07	-2.51	-6.03	5.96	3.68	-6.25

# PERFORMANCE: Bloomberg Commodity Indices

## Composite Indices

\* Click hyperlinks to open in Bloomberg

Index Name	Ticker	2018			2017		YTD	1-Year	3-Year	5-Year	10-Year	20-Year
		Mar	Feb	Q1	Q4							
Bloomberg Commodity ER	<a href="#">BCOM</a>	-0.76%	-1.85%	-0.79%	4.39%	-0.79%	2.49%	-10.85%	-36.37%	-56.61%	-17.88%	
Bloomberg Commodity TR	<a href="#">BCOMTR</a>	-0.62%	-1.73%	-0.40%	4.71%	-0.40%	3.71%	-9.31%	-35.22%	-55.20%	20.37%	
Bloomberg Commodity Spot	<a href="#">BCOMSP</a>	-0.77%	-0.94%	0.21%	6.51%	0.21%	8.11%	12.86%	-17.93%	-11.26%	243.95%	
Bloomberg Roll Select	<a href="#">BCOMRST</a>	-0.49%	-1.61%	-0.11%	4.41%	-0.11%	4.39%	-3.98%	-29.02%	-41.11%	175.67%	
1 Month Forward	<a href="#">BCOMF1T</a>	-0.68%	-1.12%	0.20%	4.82%	0.20%	4.98%	-6.03%	-30.61%	-46.93%	120.87%	
2 Month Forward	<a href="#">BCOMF2T</a>	-0.45%	-1.18%	0.50%	4.56%	0.50%	5.18%	-4.77%	-30.24%	-46.54%	156.65%	
3 Month Forward	<a href="#">BCOMF3T</a>	-0.32%	-1.11%	0.73%	5.03%	0.73%	5.96%	-3.49%	-28.22%	-42.35%	177.28%	
4 Month Forward	<a href="#">BCOMF4T</a>	0.01%	-1.49%	0.72%	4.86%	0.72%	6.04%	0.32%	-24.51%	-36.16%		
5 Month Forward	<a href="#">BCOMF5T</a>	0.08%	-1.38%	0.87%	5.20%	0.87%	6.85%	0.90%	-24.57%	-35.33%		
6 Month Forward	<a href="#">BCOMF6T</a>	0.16%	-1.44%	0.98%	5.06%	0.98%	6.73%	1.61%	-23.66%	-33.40%		
Energy	<a href="#">BCOMENTR</a>	4.87%	-7.15%	1.76%	8.93%	1.76%	9.92%	-24.61%	-58.77%	-86.97%	-45.35%	
Petroleum	<a href="#">BCOMPETR</a>	6.08%	-5.67%	4.71%	16.38%	4.71%	26.46%	-11.00%	-53.02%	-72.67%	104.26%	
Agriculture	<a href="#">BCOMAGTR</a>	-2.81%	4.71%	3.15%	-2.01%	3.15%	-5.44%	-13.29%	-36.48%	-39.83%	-41.39%	
Grains	<a href="#">BCOMGRTR</a>	-2.37%	5.14%	7.09%	-4.82%	7.09%	-3.64%	-21.54%	-43.64%	-51.30%	-49.75%	
Industrial Metals	<a href="#">BCOMINTR</a>	-4.36%	-2.17%	-6.23%	10.72%	-6.23%	12.71%	12.33%	-7.17%	-40.79%	143.17%	
Precious Metals	<a href="#">BCOMPRTTR</a>	0.15%	-2.56%	-0.53%	2.04%	-0.53%	0.53%	5.63%	-26.93%	22.35%	254.58%	
Softs	<a href="#">BCOMSOTR</a>	-4.72%	1.47%	-10.10%	5.17%	-10.10%	-19.51%	-9.47%	-39.68%	-34.86%	-60.52%	
Livestock	<a href="#">BCOMLITR</a>	-7.07%	-1.92%	-10.03%	3.31%	-10.03%	-4.44%	-18.76%	-15.71%	-41.85%	-57.75%	
Ex-Energy	<a href="#">BCOMXETR</a>	-2.93%	0.73%	-1.36%	2.91%	-1.36%	1.07%	-2.20%	-24.41%	-26.51%	29.93%	
Ex-Petroleum	<a href="#">BCOMXPET</a>	-2.49%	-0.58%	-1.94%	1.49%	-1.94%	-2.19%	-9.83%	-32.30%	-52.80%		
Ex-Natural Gas	<a href="#">BCOMXNGT</a>	-0.80%	-0.86%	0.17%	6.07%	0.17%	6.82%	-3.62%	-29.78%	-37.76%		
Ex-Agriculture	<a href="#">BCOMXAGT</a>	0.39%	-4.43%	-1.92%	7.42%	-1.92%	7.51%	-8.36%	-35.91%	-62.25%		
Ex-Grains	<a href="#">BCOMXGRT</a>	-0.23%	-3.13%	-1.88%	6.75%	-1.88%	5.35%	-6.89%	-33.85%	-57.59%		
Ex-Industrial Metals	<a href="#">BCOMXIMT</a>	0.16%	-1.64%	0.95%	3.22%	0.95%	1.49%	-13.72%	-40.27%	-59.39%		
Ex-Precious Metals	<a href="#">BCOMXPMT</a>	-0.76%	-1.58%	-0.38%	5.22%	-0.38%	4.30%	-12.35%	-37.62%	-62.06%		
Ex-Softs	<a href="#">BCOMXSOT</a>	-0.31%	-1.97%	0.34%	4.68%	0.34%	5.52%	-9.76%	-35.34%	-57.55%		
Ex-Livestock	<a href="#">BCOMXLIT</a>	-0.19%	-1.72%	0.26%	4.81%	0.26%	4.19%	-8.76%	-36.32%	-56.51%		
Ex-Agriculture & Livestock	<a href="#">BCOMXALT</a>	1.14%	-4.68%	-1.12%	7.82%	-1.12%	8.54%	-7.48%	-37.65%	-64.79%		
Bloomberg Dollar Spot	<a href="#">BBDXY</a>	-0.87%	1.42%	-2.92%	-0.09%	-2.92%	-7.97%	-6.25%	10.34%	23.66%		
S&P 500 Total Return	<a href="#">SPXT</a>	-2.54%	-3.69%	-0.76%	6.64%	-0.76%	13.99%	35.95%	86.75%	147.71%	249.54%	
US Aggregate	<a href="#">LBUSTRUU</a>	0.64%	-0.95%	-1.46%	0.39%	-1.46%	1.20%	3.64%	9.46%	42.84%	156.71%	
US Treasury	<a href="#">LUATTRUU</a>	0.94%	-0.75%	-1.18%	0.05%	-1.18%	0.43%	1.35%	5.44%	31.08%	139.49%	
US Corporate	<a href="#">LUACTRUU</a>	0.25%	-1.62%	-2.32%	1.17%	-2.32%	2.70%	7.07%	16.04%	69.56%	197.51%	
US High Yield	<a href="#">LF98TRUU</a>	-0.60%	-0.85%	-0.86%	0.47%	-0.86%	3.78%	16.33%	27.59%	121.35%	255.17%	

## Single Commodity Indices

Index Name	Ticker	2018			2017		YTD	1-Year	3-Year	5-Year	10-Year	20-Year
		Mar	Feb	Q1	Q4							
Natural Gas	<a href="#">BCOMNGTR</a>	1.51%	-11.07%	-6.85%	-11.78%	-6.85%	-28.56%	-55.86%	-75.14%	-98.58%	-99.50%	
WTI Crude	<a href="#">BCOMCLTR</a>	5.79%	-4.07%	8.83%	16.00%	8.83%	25.65%	-19.95%	-59.26%	-82.86%	37.51%	
Brent Crude	<a href="#">BCOMCOT</a>	7.25%	-5.49%	5.40%	19.23%	5.40%	30.47%	-9.42%	-54.70%	-62.66%	396.60%	
ULS Diesel	<a href="#">BCOMHOTR</a>	6.23%	-7.32%	-0.32%	13.92%	-0.32%	27.75%	-8.54%	-46.47%	-61.71%	148.15%	
Unleaded Gasoline	<a href="#">BCOMRBTR</a>	4.34%	-7.54%	0.88%	13.69%	0.88%	18.08%	-4.55%	-47.94%	-37.94%	300.35%	
Corn	<a href="#">BCOMCNTR</a>	1.65%	3.64%	8.72%	-4.59%	8.72%	-5.90%	-24.93%	-57.74%	-61.91%	-82.51%	
Soybeans	<a href="#">BCOMSYTR</a>	-0.88%	4.99%	7.88%	-2.59%	7.88%	6.12%	2.68%	0.94%	40.74%	211.87%	
Wheat	<a href="#">BCOMWHTR</a>	-8.76%	6.79%	3.22%	-8.18%	3.22%	-11.29%	-38.54%	-59.83%	-86.33%	-91.53%	
Soybean Oil	<a href="#">BCOMBOTR</a>	-0.98%	-3.01%	-4.38%	0.59%	-4.38%	-2.40%	-6.28%	-45.76%	-60.88%	-43.51%	
Soybean Meal	<a href="#">BCOMSMTR</a>	-2.58%	16.04%	20.70%	-1.24%	20.70%	19.28%	15.93%	54.22%	228.77%	1180.95%	
HRW Wheat	<a href="#">BCOMKWT</a>	-10.41%	8.49%	6.44%	-6.91%	6.44%	-7.49%	-48.76%	-62.81%	-82.75%	-78.61%	
Copper	<a href="#">BCOMHGTR</a>	-3.28%	-2.47%	-8.55%	11.30%	-8.55%	11.99%	5.54%	-16.00%	-31.59%	306.40%	
Aluminium	<a href="#">BCOMALTR</a>	-6.22%	-3.87%	-12.02%	7.59%	-12.02%	0.02%	1.85%	-17.16%	-61.28%	-17.58%	
Zinc	<a href="#">BCOMZSTR</a>	-4.90%	-2.42%	-0.82%	5.97%	-0.82%	19.74%	53.29%	56.01%	0.18%	98.32%	
Nickel	<a href="#">BCOMNITR</a>	-3.57%	1.39%	4.19%	21.32%	4.19%	31.31%	3.06%	-25.99%	-61.31%	309.13%	
Gold	<a href="#">BCOMGCTR</a>	0.41%	-1.76%	0.95%	1.87%	0.95%	5.21%	9.59%	-19.31%	34.13%	299.80%	
Silver	<a href="#">BCOMSITR</a>	-0.71%	-5.20%	-5.22%	2.55%	-5.22%	-11.99%	-6.00%	-46.22%	-16.44%	122.34%	
Sugar	<a href="#">BCOMSBTR</a>	-7.57%	1.69%	-17.87%	7.85%	-17.87%	-28.85%	-12.92%	-56.14%	-46.32%	-35.45%	
Coffee	<a href="#">BCOMKCTR</a>	-3.02%	-1.45%	-7.61%	-3.71%	-7.61%	-22.51%	-33.17%	-46.31%	-61.69%	-90.60%	
Cotton	<a href="#">BCOMCTTR</a>	-1.64%	5.98%	2.59%	14.88%	2.59%	7.05%	26.05%	-2.84%	14.01%	-67.26%	
Live Cattle	<a href="#">BCOMLCTR</a>	-10.45%	0.41%	-10.41%	0.93%	-10.41%	-7.03%	-21.89%	-5.01%	-24.75%	-11.07%	
Lean Hogs	<a href="#">BCOMLHTR</a>	-0.64%	-6.84%	-10.72%	7.85%	-10.72%	-1.39%	-13.68%	-32.76%	-63.06%	-88.52%	



## PERFORMANCE: Bloomberg Commodity Roll Select Indices

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

Index Name	Ticker	Mar	2018			2017		1-Year	3-Year	5-Year	10-Year	20-Year
			Feb	Q1	Q4	YTD						
BCOM Roll Select	<a href="#">BCOMRST</a>	-0.49%	-1.61%	-0.11%	4.41%	-0.11%	4.39%	-3.98%	-29.02%	-41.11%	175.67%	
Roll Select Agriculture	<a href="#">BCOMRAGT</a>	-2.32%	4.08%	3.13%	-1.89%	3.13%	-4.17%	-10.81%	-34.27%	-29.17%	8.62%	
Roll Select Ex-Ags & Livestock	<a href="#">BBURXALT</a>	1.34%	-4.48%	-0.87%	7.46%	-0.87%	9.38%	0.74%	-29.14%	-50.90%		
Roll Select Grains	<a href="#">BCOMRGRT</a>	-1.59%	4.67%	7.18%	-4.34%	7.18%	-1.07%	-17.94%	-42.23%	-44.20%	-2.60%	
Roll Select Softs	<a href="#">BCOMRSOT</a>	-5.23%	0.47%	-10.47%	4.22%	-10.47%	-22.24%	-10.78%	-36.27%	-17.75%	-27.72%	
Roll Select Livestock	<a href="#">BCOMRLIT</a>	-9.47%	-0.01%	-8.87%	2.45%	-8.87%	-6.33%	-27.75%	-17.05%	-28.31%	38.23%	
Roll Select Energy	<a href="#">BCOMRENT</a>	5.27%	-6.80%	2.13%	8.15%	2.13%	11.17%	-9.73%	-46.14%	-74.53%	173.66%	
Roll Select Ex-Energy	<a href="#">BCOMRXET</a>	-2.85%	0.67%	-1.08%	2.83%	-1.08%	1.58%	-1.33%	-22.78%	-17.26%	125.38%	
Roll Select Petroleum	<a href="#">BCOMRPET</a>	6.40%	-5.15%	5.05%	14.70%	5.05%	25.99%	1.62%	-42.17%	-50.69%	564.92%	
Roll Select Industrial Metals	<a href="#">BCOMRINT</a>	-4.15%	-2.11%	-5.85%	10.66%	-5.85%	13.58%	14.52%	-4.23%	-34.84%	271.55%	
Roll Select Precious Metals	<a href="#">BCOMRPRT</a>	0.16%	-2.57%	-0.49%	2.09%	-0.49%	0.62%	6.06%	-26.57%	23.52%	272.98%	

## Single Commodity Roll Select Indices

Index Name	Ticker	Mar	2018			2017		1-Year	3-Year	5-Year	10-Year	20-Year
			Feb	Q1	Q4	YTD						
Natural Gas RS	<a href="#">BCOMRNGT</a>	2.30%	-11.03%	-6.07%	-10.28%	-6.07%	-23.20%	-39.44%	-60.45%	-95.63%	-86.97%	
WTI Crude RS	<a href="#">BCOMRCLT</a>	6.24%	-4.34%	7.66%	14.86%	7.66%	24.76%	2.44%	-43.62%	-56.39%	594.68%	
Brent Crude RS	<a href="#">BCOMRCOT</a>	7.15%	-5.29%	5.26%	17.87%	5.26%	31.35%	-2.43%	-44.77%	-47.42%	683.16%	
ULS Diesel RS	<a href="#">BCOMRHOT</a>	5.08%	-6.53%	0.69%	13.86%	0.69%	21.56%	-6.11%	-45.07%	-57.44%	371.41%	
Unleaded Gasoline RS	<a href="#">BCOMRRBT</a>	6.48%	-5.21%	4.07%	8.93%	4.07%	21.87%	13.47%	-32.98%	-23.47%	638.73%	
Corn RS	<a href="#">BCOMRCNT</a>	2.23%	2.85%	7.86%	-4.12%	7.86%	-3.99%	-22.06%	-54.33%	-55.78%	-66.87%	
Soybeans RS	<a href="#">BCOMRSYT</a>	0.59%	4.84%	9.22%	-1.78%	9.22%	10.63%	11.57%	2.44%	64.87%	335.60%	
Wheat RS	<a href="#">BCOMRWHT</a>	-8.76%	6.46%	2.84%	-8.10%	2.84%	-10.09%	-38.94%	-61.51%	-83.71%	-68.07%	
Soybean Oil RS	<a href="#">BCOMRBOT</a>	-0.98%	-3.01%	-4.42%	0.12%	-4.42%	-2.52%	-4.88%	-43.80%	-54.91%	-11.82%	
Soybean Meal RS	<a href="#">BCOMRSMT</a>	-1.34%	14.68%	20.61%	-0.36%	20.61%	24.05%	17.41%	52.92%	277.95%	1425.17%	
HRW Wheat RS	<a href="#">BCOMRKWT</a>	-10.18%	7.83%	6.10%	-6.89%	6.10%	-5.98%	-45.84%	-61.73%	-80.84%	-45.81%	
Copper RS	<a href="#">BCOMRHGT</a>	-3.18%	-2.22%	-7.93%	11.40%	-7.93%	12.93%	6.84%	-15.64%	-27.07%	495.72%	
Aluminium RS	<a href="#">BCOMRALT</a>	-5.73%	-4.12%	-11.79%	7.36%	-11.79%	1.46%	5.91%	-10.66%	-55.83%	27.95%	
Zinc RS	<a href="#">BCOMRZST</a>	-4.69%	-2.25%	-0.14%	6.02%	-0.14%	20.53%	55.63%	60.88%	13.09%	218.57%	
Nickel RS	<a href="#">BCOMRNIT</a>	-3.51%	1.36%	3.99%	20.99%	3.99%	31.02%	3.78%	-24.29%	-58.05%	559.87%	
Gold RS	<a href="#">BCOMRGCT</a>	0.42%	-1.78%	0.99%	1.92%	0.99%	5.27%	10.11%	-18.97%	34.71%	307.79%	
Silver RS	<a href="#">BCOMRSIT</a>	-0.71%	-5.21%	-5.20%	2.58%	-5.20%	-11.77%	-5.69%	-45.73%	-14.18%	156.04%	
Sugar RS	<a href="#">BCOMRSBT</a>	-8.36%	0.20%	-18.16%	4.88%	-18.16%	-33.65%	-15.54%	-51.73%	-25.66%	43.52%	
Coffee RS	<a href="#">BCOMRKCT</a>	-3.02%	-1.88%	-7.88%	-3.74%	-7.88%	-22.83%	-33.50%	-45.12%	-55.95%	-83.20%	
Cotton RS	<a href="#">BCOMRCTT</a>	-2.39%	5.08%	1.97%	16.36%	1.97%	5.33%	26.45%	-0.06%	34.43%	-49.26%	
Live Cattle RS	<a href="#">BCOMRLCT</a>	-11.14%	0.58%	-9.39%	0.41%	-9.39%	-7.23%	-22.60%	-8.20%	-14.22%	66.41%	
Lean Hogs RS	<a href="#">BCOMRLHT</a>	-6.03%	-0.87%	-7.62%	5.57%	-7.62%	-4.95%	-34.98%	-30.98%	-49.17%	-21.25%	

## BCOM Constituent Weights

[BCOM Index MEMB <GO>](#) \* Click hyperlinks to open in Bloomberg

Group	Commodity	Ticker	Mar 2018 Contrib to Return %	Mar 29 2018 Weight %	Feb 28 2018 Weight %	Mar 2018 Weight% Change	2018 Target Weight
Energy	Natural Gas	<a href="#">NG</a>	0.10	7.94	7.77	↑ 0.17	8.01%
	WTI Crude	<a href="#">CL</a>	0.41	7.70	7.23	↑ 0.47	7.32%
	Brent Crude	<a href="#">CO</a>	0.52	7.78	7.26	↑ 0.52	7.68%
	ULS Diesel	<a href="#">HO</a>	0.21	3.61	3.37	↑ 0.23	3.67%
	Gasoline	<a href="#">XB</a>	0.17	4.17	3.97	↑ 0.20	3.75%
	<b>Subtotal</b>			<b>1.41</b>	<b>31.20</b>	<b>29.61</b>	<b>↑ 1.59</b>
Grains	Corn	<a href="#">C</a>	0.10	6.74	6.59	↑ 0.15	6.13%
	Soybeans	<a href="#">S</a>	-0.07	6.38	6.40	↓ (0.02)	5.96%
	Wheat	<a href="#">W</a>	-0.33	3.40	3.70	↓ (0.30)	3.26%
	Soybean Oil	<a href="#">BO</a>	-0.03	2.58	2.59	↓ (0.01)	2.75%
	Soybean Meal	<a href="#">SM</a>	-0.10	3.60	3.67	↓ (0.07)	3.04%
	HRW Wheat	<a href="#">KW</a>	-0.16	1.39	1.54	↓ (0.15)	1.30%
<b>Subtotal</b>			<b>-0.59</b>	<b>24.09</b>	<b>24.49</b>	<b>↓ (0.40)</b>	<b>22.44%</b>
Industrial Metals	Copper	<a href="#">HG</a>	-0.24	6.67	6.86	↓ (0.18)	7.16%
	Aluminum	<a href="#">LA</a>	-0.27	4.07	4.31	↓ (0.24)	4.51%
	Zinc	<a href="#">LX</a>	-0.16	3.01	3.14	↓ (0.13)	3.10%
	Nickel	<a href="#">LN</a>	-0.11	2.91	3.00	↓ (0.09)	2.76%
	<b>Subtotal</b>			<b>-0.78</b>	<b>16.66</b>	<b>17.31</b>	<b>↓ (0.65)</b>
Precious Metals	Gold	<a href="#">GC</a>	0.03	11.93	11.76	↑ 0.18	11.95%
	Silver	<a href="#">SI</a>	-0.03	3.44	3.44	↓ (0.00)	3.67%
	<b>Subtotal</b>		<b>0.00</b>	<b>15.37</b>	<b>15.20</b>	<b>↑ 0.17</b>	<b>15.62%</b>
Softs	Sugar	<a href="#">SB</a>	-0.24	2.88	3.10	↓ (0.22)	3.54%
	Coffee	<a href="#">KC</a>	-0.08	2.38	2.44	↓ (0.06)	2.61%
	Cotton	<a href="#">CT</a>	-0.03	1.51	1.53	↓ (0.02)	1.45%
	<b>Subtotal</b>		<b>-0.34</b>	<b>6.78</b>	<b>7.07</b>	<b>↓ (0.29)</b>	<b>7.60%</b>
Livestock	Live Cattle	<a href="#">LC</a>	-0.44	3.69	4.40	↓ (0.71)	4.31%
	Lean Hogs	<a href="#">LH</a>	-0.02	2.21	1.93	↑ 0.28	2.08%
	<b>Subtotal</b>		<b>-0.46</b>	<b>5.90</b>	<b>6.33</b>	<b>↓ (0.43)</b>	<b>6.39%</b>
<b>Total</b>			<b>-0.76</b>	<b>100.00</b>	<b>100.00</b>		<b>100.00%</b>

# BLOOMBERG INTELLIGENCE: COMMODITY DASHBOARDS

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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>Natural Gas Inventories</b>					
US Working Storage (Bcf)					
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>
Net Injections/Withdrawals	12.00	-42.00	54.00	452.07	-57.00
Consensus (Bloomberg Survey)	1,474.00	1,463.00	11.00	0.75	901.00
<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
China, South Africa Rule Precious Metals Markets: 2015	
Chinese demand may remain key for gold and the companies that mine it, after their shares fell more than 12% in 2014. China, the largest gold consumer, may exercise more direct influence over the market with ...	
<b>Key Indicators</b>	Latest
Avg Gold Spot Price	1,228
Known ETF Gold Hold	52,128
IMF Global Gold Reser	1,036
<b>Operating Stats (Median)</b>	
Sales Growth (YoY %)	-8.90
EBITDA Margin (%)	70.89
TI2M Sales Growth (%)	.83
Return on Equity (%)	2.91
<b>Equity Valuation (Median)</b>	
Est P/E Current Yr	61.79
Price/Book	1.84
<b>Competitors</b>	NYTD
Tancan Royalty Ex	-38.10
Sandstorm Gold Ltd	-20.84
Franco-Nevada Corp	-49.81
Royal Gold Inc	-88.28
Silver Wheaton Corp	-45.88

## Agricultural Chemicals: BI AGCH <GO>

Indicator	Value
China, South Africa Rule Precious Metals Markets: 2015	
Chinese demand may remain key for gold and the companies that mine it, after their shares fell more than 12% in 2014. China, the largest gold consumer, may exercise more direct influence over the market with ...	
<b>Key Indicators</b>	Latest
Agricultural Price Ind	1.25
U.S. Farm Net Cash In	0.40
U.S. Corn Price Future	3.60
<b>Operating Stats (Median)</b>	
Sales Growth (YoY %)	20.63
EBITDA Margin (%)	15.30
EPS Growth (YoY %)	-11.17
ROIC (%)	7.83
<b>Equity Valuation (Median)</b>	
Est P/E Current Yr	15.00
Price/Book	1.00
<b>Competitors</b>	NYTD
Yara International AG	-28.92
U.S. FERT EPC	-10.93
Agrion Inc	-11.19
Dow Chem of India	-27.98
Syngenta AG	-14.69
Sudol Arabian Fertiliz	-14.65
Monsanto Co	-3.50
IFF BioAg Holding	-26.65
East Chemicals Ltd	-12.41
Hoechst Co/The	-2.25

## Copper: BI COPP <GO>

Indicator	Value
China, South Africa Rule Precious Metals Markets: 2015	
Chinese demand may remain key for gold and the companies that mine it, after their shares fell more than 12% in 2014. China, the largest gold consumer, may exercise more direct influence over the market with ...	
<b>Key Indicators</b>	Latest
China GDP YoY (%)	7.30
YTD Copper Surplus/-	201,158
Major Exch Copper Inv	599,596
<b>Operating Stats (Median)</b>	
Sales Growth (YoY %)	-1.59
EBITDA Margin (%)	26.52
TI2M Sales Growth (%)	-2.59
Return on Equity (%)	2.71
<b>Equity Valuation (Median)</b>	
Est P/E Current Yr	17.46
Price/Book	1.09
<b>Competitors</b>	NYTD
MNC Nirx Nickel O3	-426.11
Barrick Gold Corp	-421.25
Vale SA	-19.95
Freeport-McMoRan Inc	-16.79
Anglo American PLC	-16.62
Rio Tinto PLC	-8.28
Glencore PLC	-6.09
Grupo Mexico SAB de	-44.22
BHP Billiton Ltd	-42.89
Southern Copper Corp	-42.52

## Aluminum: BI ALUM <GO>

Indicator	Value
China, South Africa Rule Precious Metals Markets: 2015	
Chinese demand may remain key for gold and the companies that mine it, after their shares fell more than 12% in 2014. China, the largest gold consumer, may exercise more direct influence over the market with ...	
<b>Key Indicators</b>	Latest
China Industrial Prod	7.60
Global Primary Alumi	4.28M
Global Primary Alumi	4.17M
<b>Operating Stats (Median)</b>	
Sales Growth (YoY %)	2.18
EBITDA Margin (%)	8.70
TI2M Sales Growth (%)	1.46
Return on Equity (%)	4.95
<b>Equity Valuation (Median)</b>	
Est P/E Current Yr	15.05
Price/Book	1.38
<b>Competitors</b>	NYTD
Yunnan Aluminum Co	-471.38
Aluar Aluminum Argent	-459.64
Shandong Manahan Al	-427.00
Zhejiang Wanfang Alum	-425.74
Alcoa Inc	-17.67
Aluminum Corp of Chi	-16.16
Hindalco Industries Lt	-16.09
Alumina Ltd	-12.26
United Co RUSAL PLC	-6.70
Norsk Hydro ASA	-6.14

## 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>
Commodity arbitrage calculator	<a href="#">CARC</a>
Commodity fundamental data explorer	<a href="#">FDM</a>
Commodity futures overview	<a href="#">CMBQ</a>
Security finder	<a href="#">SECF</a>
Commodity data contributors & broker	<a href="#">CDAT</a>
Contract table menu	<a href="#">CTM</a>
Seasonality chart	<a href="#">SEAG</a>
Commodity curve analysis	<a href="#">CCRV</a>
Commodity fair values	<a href="#">CFVL</a>
Commodity price forecasts	<a href="#">CPFC</a>
Commitments of Traders Report	<a href="#">COT</a>
Commodity maps	<a href="#">BMAP</a>
Commodity options monitor	<a href="#">OMON</a>
Commodities charts	<a href="#">COSY</a>
Commodity Investors menu	<a href="#">CMNV</a>
US exchange traded product fund flows	<a href="#">ETF</a>

### Commodity Indices

Index description	<a href="#">BCOM Index DES</a>
Index constituent weights	<a href="#">BCOM Index MEMB</a>
Listed index futures	<a href="#">BCOM Index CT</a>
Option volatility surface	<a href="#">BCOM Index OVDV</a>
Seasonality chart	<a href="#">BCOMNG Index SEAG</a>
Commodity index futures movers	<a href="#">FMV</a>
Commodity index ranked returns	<a href="#">CRR</a>

### Weather

Global weather database	<a href="#">WETR</a>
US snow monitor	<a href="#">SNOW</a>
EU weather & utility models	<a href="#">EUMM</a>

### Energy

Top energy news	<a href="#">ETOP</a>
Top oil news	<a href="#">OTOP</a>
Crude Oil Production Dashboard	<a href="#">BI OILS</a>
First Word oil	<a href="#">NI BFWOIL</a>
News on oil inventories	<a href="#">TNI OIL INV</a>
Oil Buyer's Guide newsletter	<a href="#">NI OGBRIEF</a>
Pipes & Wires newsletter	<a href="#">NI PAWSBRIEF</a>
Oil market analysis	<a href="#">BOIL</a>
Nat gas spot prices	<a href="#">BGAS</a>
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Oil markets menu	<a href="#">OIL</a>
Crude stored in tankers	<a href="#">NOON</a>
Refinery outages	<a href="#">REFO</a>
Oil's decline	<a href="#">EXTS</a>
Oil versus inflation expectations	<a href="#">SWIF</a>

### Metals

Top metal news	<a href="#">METT</a>
Precious metal dashboard	<a href="#">BI PMETG</a>
Base metals dashboard	<a href="#">BI BMET</a>
Metals prices and data	<a href="#">MINE</a>
Precious metals prices and rates	<a href="#">MTL</a>
Metals Bulletin	<a href="#">MB</a>
COMEX inventories	<a href="#">COMX</a>
LME monitor	<a href="#">LME</a>
LME implied volatilities	<a href="#">LMIV</a>
LME warehouse inventories	<a href="#">LMEI</a>

### Agriculture

Top agriculture news	<a href="#">YTOP</a>
Agriculture calendar	<a href="#">AGRI</a>
Agriculture spot prices	<a href="#">AGGP</a>
Agriculture supply & demand	<a href="#">AGSD</a>
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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