Bloomberg Commodity Index (BCOM)

# **Recovery Favored**

- Implications of sustained lower commodity prices favor recovery
- 'Meh' crude oil market is likely as primary drivers extended
- Copper and gold price beatings are likely to strengthen recovery
- Strengthening wheat may be early agriculture-bottom Indication
- Metals-market fate may rest on copper, back in key support zone

**Broad Market Outlook Energy** 3 Metals 4 **Agriculture** 7 DATA **PERFORMANCE**: 11 Overview, Commodity TR, Prices, Volatility **CURVE ANALYSIS:** 15 Contango/Backwardation, Roll Yields. Forwards/Forecasts **MARKET FLOWS:** 18 Open Interest, Volume, COT, ETFs **PERFORMANCE** 21

Data and outlook as of July 31

Note - Click on graphics to get to the Bloomberg terminal

Mike McGlone – BI Senior Commodity Strategist

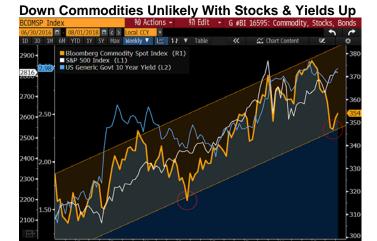
# Implications of Sustained Lower Commodity Prices Favor Recovery

Performance: July -2.1%, YTD -2.1%, Spot -1.5%. (Returns are total return (TR) unless noted)

(Bloomberg Intelligence) -- The almost-10% peak-to-trough correction in the Bloomberg Commodity Total Return Index mirrors last year, with a recovery the likely outcome. The implications of sustaining below July's broad commodity lows would be more severe for stocks and the global reflation recovery trajectory.

#### Commodities Likely to Recover From July Lows.

What appears out of place in recent market performance is the dip in the commodity market. In the graphic depicting the upward trajectory of the stock market, bond yields and commodity prices since 2016, commodities appear to have the most potential upside. The implications of further downside in prices would be more severe and thus unlikely. Global economic growth on a recovery trajectory -- with increasing inflation, bond yields and commodity prices -- is more sustainable. Trade tensions and the U.S. dollar bounce should put short-lived pressure on the nascent commodity bull market.



BI COMD (the commodity dashboard)

If the Bloomberg Commodity Index sustains below the July low of this year, implications for increasing stocks and bond yields are more severe. Industrial metals appear to have the most potential reversion room, with copper atop the list.

## **MACRO PERFORMANCE**

#### Macro Outlook Supports Commodity Recovery.

Strong stocks overshadowing a declining commodity market since the end of April appears unsustainable, favoring a commodity recovery. Increasing bond yields and the Bloomberg Barclays U.S. Treasury 20+ Index leading 2018 macroeconomic performance decliners at the end of July indicate global inflationary forces -- a juxtaposition with declining commodity prices. A dip in the nascent commodity bull market is the more likely outcome, which forces the Bloomberg Commodity Index to play catch-up to stocks into the 2018 year-end.

**Commodities Mirror Opposite of the Dollar in 2018** 

••••••••	• pp•••• ••				
Security	Chg YTD %	1 Chg	Chg	1Yr %	2Yr %
		July	QTD Pct	Chg	Chg
S&P 500 Total Return Index	+6.5%	+3.7%	+3.7%	+16.2%	34.9%
S&P 500 Index	+5.3%	+3.6%	+3.6%	+14.0%	29.6%
MSCI World Net Total Return US	+3.3%	+2.9%	+2.9%	+11.6%	29.6%
Bloomberg Dollar Spot	+1.3%	6%	6%	+1.8%	5%
Bloomberg Barclays US Corporat	+1.2%	+1.0%	+1.0%	+2.5%	13.7%
Bloomberg Commodity Spot Index	-1.5%	-2.6%	-2.6%	+6.0%	15.0%
Bloomberg Commodity Index Tota	-2.1%	-2.1%	-2.1%	+2.7%	3.5%
MSCI Emerging Markets Net Tota	-4.4%	+2.4%	+2.4%	+4.6%	30.6%
Bloomberg Barclays U.S. Treasu	-4.9%	-1.9%	-1.9%	-1.2%	-11.4%

Holding the BCOM under July lows would put it up against an expanding global economic trajectory, declining bond prices and increasing stocks. A commodity recovery appears more likely. Trade tensions and the U.S. dollar bounce should prove a temporary commodity price suppressor.

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## SECTOR PERFORMANCE

Copper, Industrial Metals Atop Radar Watch. Industrial metals leading decliners in 2018 won't last absent a more severe global economic slowdown. This is unlikely. supporting a recovery in the nascent metals bull market, notably vs. the much more extended stock market rally. Copper back near key bull-market support puts it at the top of our watch list. The metal is poised to recover, with severe macroeconomic implications if it doesn't.

Industrial Metals & Energy Are Ripe for Reversion

Security	Chg YTD %	Chg	Chg	1Yr %	2Yr %
		July	QTD Pct	Chg	Chg
Bloomberg Energy Subindex Tota	+7.8%	-4.4%	-4.4%	+23.2%	23.0%
Bloomberg Grains Subindex Tota	+2.9%	+6.5%	+6.5%	-9.3%	-11.2%
Bloomberg Agriculture Subindex	-3.2%	+2.7%	+2.7%	-11.7%	-16.4%
Bloomberg Precious Metals Subi	-7.5%		-2.7%		-15.2%
Bloomberg All Metals Total Ret	-8.8%	-3.8%	-3.8%	+.6%	4.4%
Bloomberg Livestock Subindex T	-9.2%	-4.3%	-4.3%	-8.9%	1.1%
Bloomberg Industrial Metals Su	-9.8%	-4.7%	-4.7%	+5.4%	25.0%

Similar to energy, metals demand vs. supply is quite favorable. Conditions are in transition for agriculture, notably the grains. Back near multiyear lows with trade tension eliminating much of a production-risk premium, prospects for a price spike are elevated.

## ATTRIBUTION

Metals Likely to Play Catch-Up to Energy. The only sector to contribute to 2018 BCOM total returns -- energy -- stands to give some more, but others are poised to pick up. Led by crude oil, energy added about 240 bps to total returns as of July 30. The base metals' subtraction of about 210 bps appears the most likely to ease, with copper back in a significant support zone. Precious metals and agriculture are more middle-of-the-road totalreturn pressure factors, averaging near 140 bps. Both are poised to lessen the drag and potentially go positive this year.

Stalwart E			spire Cop	y Cats	
Name	Start % Wgt	End % Wgt	Avg % Wgt	Tot Rtn	CT <b>₫</b>
■ BCOM_SB (Exclusio	100.0	100.0	100.0	-3.1	-3.1
⊞ Energy	30.4	33.3	31.6	6.7	2.0
■ Not Classified		5.5	0.5	-2.2	0.0
■ Livestock	6.1		5.5		-0.6
■ Agriculture	27.1	30.3	30.0	-4.2	-1.2
■ Precious Metals	15.5	14.6	15.1		-1.3
<b>■ Base Metals</b>	20.9	16.2	17.2	-10.7	-2.0
Port Wgt				Contribution	า ↓
31.60		Energy			1.97
0.52		Not Classified		BCOM Attributi	-0.03
5.51		Livestock		2017 through Ju	··· -0.63
30.01		Agriculture Precious Metals		31. Note, these estimates, actu	-1.21
15.14	P			results will vary.	-1.29
17.22		Base Metals			-1.95

Gold is close to key support of \$1,200 an ounce, with almost-record net shorts, and grains appear to have weathered the June storm. Livestock, also under pressure with trade tensions, has subtracted about 70 bps from BCOM total returns.

**Performance – Commodity Total Returns** 

Name	3 Mth % Change	YTD % Change		2 Yr % Change
■ BCOM Total Return Indices				
Brent Crude Index	2.2	14.6	50.0	64.6
WTI Crude Index	2.4	15.9	40.6	51.9
Nickel Index	1.7	8.7	34.1	26.6
Heating Oil Index	0.7	5.0	31.7	55.9
Cotton Index	8.1	15.7	31.5	22.8
Gasoline Index	0.9	5.5	24.4	46.7
Aluminum Index	-8.2	-7.6	9.1	24.8
Soybean Meal Index	-13.8	5.8	1.6	-9.7
Wheat Index	2.6	20.4	1.5	-3.2
HRW Wheat Index	-1.8	19.5	0.0	-6.0
Gold Index	-6.5	-7.0	-4.7	-11.2
Zinc Index	-15.1	-21.5	-5.0	14.7
Live Cattle Index	3.6	-4.1	-5.7	4.5
Copper Index	-9.3	-17.1	-5.8	21.0
Silver Index	-4.0	-10.0	-8.5	-26.5
Corn Index	-10.2	0.1	-9.7	-9.9
Soybeans Index	-15.3	-8.7	-11.2	-13.9
Platinum Index	-7.2	-11.5	-12.9	-29.4
Natural Gas Index	-1.4	-7.6	-16.0	-33.3
Lean Hogs Index	-7.9	-20.5	-16.2	-13.9
Soybean Oil Index	-5.6	-14.7	-17.7	-10.2
Coffee Index	-13.6	-16.9	-27.4	-36.3
Sugar Index	-11.5	-31.4	-32.3	-48.4

#### Performance - Prices

Name	3 Mth % Change	YTD % Change		
■ BCOM Single Commodity Price				
Brent Crude	0.2	9.5	41.4	73.8
WTI Crude	1.1	12.5	38.3	69.7
Nickel	1.8	9.1	35.1	29.5
Gas Oil	0.0	7.3	33.7	77.0
Heating Oil	0.3	1.5	28.4	67.5
Cotton	6.0	13.9	25.9	20.8
Gasoline	-1.1	14.8	24.3	58.4
Wheat	5.4	30.6	20.9	37.4
HRW Wheat	1.4	31.3	20.6	37.1
Aluminum	-8.3	-8.1	9.3	26.8
Soybean Meal	-16.6	7.9	8.7	1.1
Palladium	-1.9	-13.4	2.8	28.2
Corn	-8.5	5.8	2.4	14.0
Copper (LME)	-7.8	-14.0	-2.0	27.3
Natural Gas	-1.6	-6.7	-2.2	-0.5
Live Cattle	3.0	-10.1	-2.4	-3.3
Gold	-6.1	-6.3	-3.8	-9.5
Copper (CME)	-9.2	-16.4	-4.3	25.4
Soybeans	-14.8	-5.7	-6.9	-8.6
Zinc	-15.9	-23.1	-7.5	13.2
Silver	-4.0	-9.7	-7.6	-24.5
Platinum	-7.2	-11.1	-12.6	-28.6
Soybean Oil	-5.1	-13.0	-15.2	-3.6
Coffee	-12.4	-13.4	-20.7	-23.8
Sugar	-9.8	-30.4	-29.1	-43.9
Lean Hogs	-23.5	-29.3	-36.8	-26.5

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**Energy** (Index weight: 29% of BCOM)
Performance: July -4.4%, YTD +7.8, Spot +7.1%
\*Note index weights are the YTD average.

## The 'Meh' Market

Meh' Crude Oil Market Is Likely as Primary Drivers Extended. Absent a sustained bid on geopolitical tension, the best of the crude bull market is likely over as the primary drivers are extended. Sustaining above \$70 or near \$80 requires an extended supply cut to offset rapidly rising U.S. output and weaker demand growth in advanced nations. Good support is near \$60.

Extended Bull -- \$60 to \$80 WTI Crude Oil Range. The best of the WTI crude oil bull run is likely over. An extended range trade of \$60-\$80 a barrel should mark the majority of the bell curve. There's limited running room left in primary bull-market drivers including the backward-trending futures curve, declining inventories and demand in excess of supply. U.S. production should continue to exceed most estimates, while the bigger picture of rapidly advancing technology is reducing demand growth and accelerating supply. Energy is the sector most susceptible to shifting global demographic paradigms.

Best of Crude Oil Bull Market Market Likely Over



Last year, \$60.51 was the high for crude, and \$79.28 was the average low from 2011-13. A sustained bid arising from geopolitical tensions is needed to keep crude much above the \$70.44 halfway mark of the 2011-16 bear market. Backwardation should continue to boost total returns.

**Strong Crude, Weak Commodities Unsustainable**. The disparity between crude-oil strength and weak broadcommodity prices is unsustainable, in our view. The gap

hasn't been this wide in two decades. Recently reaching 30% above its 20-month average, crude has rarely advanced so quickly without similar progress in the Bloomberg Commodity Spot Index, up only 3%. After reaching a similar extreme in 1996, crude oil declined almost a third vs.10% for broad commodities in 1997, on the back of a strong greenback in the midst of a powerful rally that didn't peak until 2002.

**Broad Commodities Appear Too Low to Crude Oil** 



Conditions are the opposite now. The trade-weighted broad dollar peaked last year at levels similar to 2002. Unless the dollar can sustain an advance above those lofty levels, broad commodities are more likely to follow the path paved by crude oil.

#### **PERFORMANCE DRIVERS**

Positive Roll Yields Offsetting Spot Resistance. The best of appreciation in the rolling front crude-oil-future bull market may be over, but positive roll yields from backwardation should be just kicking in. Brent crude futures ended July up almost 11% vs. 17% for the Bloomberg Brent Crude Oil Subindex Total Return. Over one-third of the total return is from rolling into lower futures prices. The annual Brent roll yield at the end of July -- just under 9% -- is almost double the average of the same measure from 2012-14.

Returns Backing up but Supported by Backwardation

	,pp				
Security	Chg YTD %	Chg July	Chg QTD Pct	1Yr % Chg	2Yr % Chg
Bloomberg WTI Crude Oil Subind	+17.1%	-4.9%	-4.9%	+39.3%	47.8%
Bloomberg Brent Crude Subindex	+16.0%	-5.7%	-5.7%	+49.2%	61.4%
Bloomberg Petroleum Subindex T	+13.0%	-4.5%	-4.5%	+38.6%	52.7%
Bloomberg Energy Subindex Tota	+7.8%	-4.4%	-4.4%	+23.2%	23.0%
BBG Energy Spot	+7.6%	-4.6%	-4.6%	+25.5%	45.1%
Bloomberg Heating Oil Subindex	+6.4%	-3.4%	-3.4%	+31.4%	52.0%
Bloomberg Unleaded Gasoline Su	+6.2%	-2.2%	-2.2%	+24.1%	45.9%
Bloomberg Natural Gas Subindex	-6.7%	-3.9%	-3.9%	-14.4%	-35.2%

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The rest of 2018 is more likely to see similar petroleum range trading that has been the case since the end of April. Weak natural gas prices remain the primary energy drag this year, but they're also getting support from backwardation, which occurs when front futures are higher than backs, often happening when demand exceeds supply.

Front Energy Futures to July 31

	, . ∽	taioo to oai	,					
Ticker	Last	Chg YTD &	Chg MTD	Chg	1 Yr		g Change	
			8	QTD %	Ago	Ago Pct 1Y	r 2 Year	High
							Percent	
+ Generic 1st 'XB' Future	212.9	+18.3%	-2.3%	-2.3%	170.6	132.1 +24.8%	61.2%	227.0
+ Generic 1st 'CL' Future	68.4	+13.2%	-7.8%	-7.8%	50.2	41.6 +36.3%	64.4%	74.2
+ Generic 1st 'CO' Future	74.3	+11.0%	-6.5%	-6.5%	52.7	42.5 +41.0%	74.9%	79.8
+ Generic 1st 'HO' Future	213.2	+2.7%	-3.5%	-3.5%	165.2	127.6 +29.1%	67.1%	229.0
+ Generic 1st 'NG' Future	2.8	-5.9%	-5.0%	-5.0%	2.8	2.95%	-3.4%	3.9

# **Metals**

**All** (Index weight: 35% of BCOM) Performance: July -3.8%, YTD -8.8%

**Industrial** (Index weight: 19.0% of BCOM. Performance: July -4.7%, YTD -9.8, Spot -10.2%)

**Precious** (Index weight: 16.1% of BCOM. Performance: July -2.7%, YTD -7.5, Spot -6.6%)

# The Beating Is Nearing an End

Copper and Gold Price Beatings Are Likely to Strengthen Recovery. Nietzsche's "what does not kill me makes me stronger" maxim should play out via a recovery in metals prices. Copper and gold have returned to key support zones, essentially requiring a reversal in the drivers behind the nascent bull market for metals. Lasting effects and the duration of trade tension and the recovering dollar should prove limited, and eventually look more like a mere dip in the trend. Copper tops the radar-watch at breakout levels from the early bull-market recovery.

Gold's short-cover risks are elevated. The setup, with prices near key supports and near-record-short net positions, is a recipe for a sharp rally and potential longer-term bottom. A minor spark should bottom the market vs. more sustained factors, such as dollar strength, which would hurt gold.

## **Broad Metals & Copper Support**

Metals-Market Fate May Rest on Copper, Back in Key Support Zone. It's unlikely that global economic growth will slow and the dollar substantially appreciates further, supporting a metals recovery. A trade-tension-inspired dip in the bull-market trend is the likelier outcome. Back at a key bull-market support zone, copper is at the top of our watch list.

Copper Downside Is Limited From July Levels. The metals-market fate may rest on copper recovering from the July support zone. This year's low about mirrors what was a peak in December 2016 -- the point that marked the breakout bull-market rally. Chinese and global purchasing-managers' indexes would have to abruptly downshift for copper's bull market to reverse. The PMI gauges -- longer-lagging measures than the stock market -- are well above the 50 threshold and are tracking global economic growth.

**Declining China Stock Market, Copper Support** 



Under pressure with the Chinese stock market, further copper declines should be limited. Implications for global economic growth would be significant if copper sustains below this support zone. Since 2005, measured annually, copper's correlations are 0.90 with the JPMorgan Global Manufacturing PMI and 0.70 to the MSCI China Index.

Metals Revisit Key Bull-Market Support Zone. Unless metals are signaling a global economic slowdown, the most significant correction in the bull market should be resolved. Back at the bottom 52-week Bollinger Band for the first time since the end of 2015 (near the bear-market low), the Bloomberg All Metals Total Return Index should recover. Sustained dollar strength and a shift to a weaker global economy would likely be needed to maintain prices at lower levels.

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Among the major commodity sectors, metals are the most sensitive to greenback movements. Since 2005, the allmetals index is 0.67 negatively correlated to the Bloomberg Dollar Spot Index on an annual basis. The metals' negative beta to the dollar is 2.7.

## **Elevated Precious Short Risks**

Gold Bear-Trap Risks Are as Elevated as the Bear-Market Bottom. An almost unprecedented level of net-short positions in a gold bull market, with prices nearing support, is a recipe for a sharp rally and could establish its longer-term nadir. Gold appears to be pricing in the dollar's next ascent. Risks appear to favor the bulls at end-of-July levels.

**Gold Nearing Key Support With Record Shorts** 



Gold's Short-Cover Risks Reach Extremes. Good support and extremely short net positions are a recipe for a sharp gold-price recovery. Managed-money net positions for gold on the CME future have never been

shorter in the database since 2006. For the first time since about the bear-market low at the end of 2015, gold prices are revisiting the bottom 52-week Bollinger Band. Approaching \$1,200-an-ounce support, gold should require some form of negative shock to sustain below this level. A simple spark should lift it back toward \$1,300.

Sustained dollar strength is a primary potential bearish factor. More of the same since the advent of the interest rate-hike cycle is bullish. A longer-term bottom may be forming. The 52-week mean is about \$1,300, while Bollinger Bands are showing early recovery from their narrowest in 17 years.

Indicator: Peak Dollar, Gold Bottom Brewing. If the history of compressed gold prices is a guide, the dollar should be peaking, with the potential for higher gold prices far outweighing downside risks. It's been about two decades since gold sustained a narrower 24-month range. This Bollinger Band measure has a tendency to be a mirror opposite of the dollar. The most recent similarly compressed period in 2001-02 coincided with a peak in the trade-weighted broad dollar index and a bottom in gold.

The Dollar Appears Opposite Gold Bollinger Bands



Peaks in this volatility measure also about matched dollar lows in 2008 and 2011. Initial gold support and resistance levels -- \$1,180 and \$1,355 an ounce -- in the 24-month bands don't get much more compressed. Gold is up 15% in a tightening cycle despite a 1% gain in the dollar, indicating a greater propensity for the metal to appreciate in value.

Coiled Gold vs. Uncaged Crude -- Gold Favored. The gold-to-crude oil relationship is approaching longer-term support levels favoring the metal. At 18 barrels of WTI crude vs. an ounce of gold, the ratio returned to the

Bloomberg Commodity Index (BCOM)

average since 2007. Since the ratio bottom close to 6 in 2008, the trend has been higher, with gold outperforming oil. With WTI pushing on good resistance to above \$70 a barrel vs. gold stuck in the narrowest 52-week range in over a decade, the ratio may drift lower, but risks a sharp reversion recovery.

Gold vs. Crude Investments Far From Price Ratio

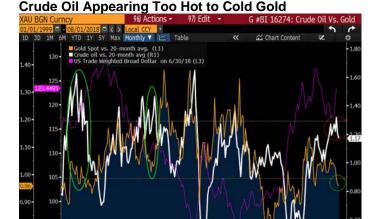


Gold is ripe to break out of its narrowing cage with positive primary drivers: increasing inflation, a weakening greenback and bottoming stock market volatility. Once geopolitical issues subside, crude oil is at high risk of a 20% correction, common in the current bull market since 2016. Investments in gold vs. crude oil generally favor the metal.

#### Crude-to-Gold Disparity Most Extreme Since 2005.

The disparity in crude oil strength vs. gold weakness is nearing record extremes, supporting some reversion. Crude oil hasn't been more stretched above its 20-month average, with gold at a similar discount, since 2005. The period from about 2002 until the financial crisis in 2008 was quite positive for both gold and crude oil, with the dollar in a downtrend. Similar patterns appear to be emerging, particularly with the greenback resembling a peak near the 2002 high.

Gold and crude oil are the most widely traded commodities but among the least correlated. At 18 barrels of WTI crude vs. an ounce of gold on July 31, the relationship is near the mean since the inception of crude-oil trading in 1983. Since 2008, this ratio has been moving higher and is near good support levels.



## **PERFORMANCE DRIVERS**

Industrial Metals' Decline Appears Excessive. U.S.-China trade tensions are pressuring industrial metals at an excessive pace. The almost-10% two-month decline in the Bloomberg Industrial Metals is the most extreme since 11% in October-November 2015, near the bearmarket low. Copper and zinc are among the most significant major commodity decliners in 2018, surpassed only by sugar. A dip in a bull market is the likelier scenario than a long-term pullback in global economic growth, which could justify sustaining such sharp declines.

**Metals Total-Return Performance Looking Extreme** 

Security	Chg YTD %	Chg	Chg	1Yr %	2Yr %
		July	QTD Pct	Chg	Chg
Bloomberg Nickel Subindex Tota	+9.8%	-5.9%	-5.9%	+36.5%	29.1%
Bloomberg Aluminum Subindex To	-6.7%	-2.5%	-2.5%	+9.6%	25.2%
Bloomberg Gold Subindex Total	-6.8%	-2.4%	-2.4%	-4.1%	-11.0%
Bloomberg Precious Metals Subi	-7.5%	-2.7%	-2.7%		-15.2%
Bloomberg All Metals Total Ret	-8.8%	-3.8%	-3.8%	+.6%	4.4%
Bloomberg Silver Subindex Tota	-9.6%	-3.8%	-3.8%	-8.2%	-25.6%
Bloomberg Industrial Metals Su	-9.8%	-4.7%	-4.7%	+5.4%	25.0%
Bloomberg Copper Subindex Tota	-14.9%	-4.4%	-4.4%		23.0%
Bloomberg Zinc Subindex Total	-19.5%	-7.7%	-7.7%	-3.2%	18.8%

Gold and precious metals are primarily victims of recoveries in the dollar and the stock market. Up 5% in 2018, the trade-weighted broad-dollar index will likely need to sustain its pace of recovery, or gold should rally. The gold-to-dollar annual negative beta is 1.7 in the past 20 years.

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**Agriculture** (Index weight: 30% of BCOM)
Performance: July +2.7%, YTD -3.2%, Spot +0.5%)

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

Performance: July +6.5%, YTD +2.9%, Spot +8.8%)

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

Performance: July -5.7%, YTD -16.8, Spot -15.9%)

# Agriculture, Wheat Leading Recovery?

Strengthening Wheat May Be Early Agriculture-Bottom Indication. Ending July near last year's spike-induced peak, the world's most widely traded wheat future has stronger legs this time, with bullish implications for broad agriculture. Less significant in dollar-value-of-production terms as corn and soybeans, wheat sowing is the most widely dispersed globally. Indications of a climate-change-related demand vs. supply inflection point are at hand, with wheat leading all major commodities in 2018, supported by adverse weather.

Despite increasing volatility, notably due to trade tensions and exceptional U.S. Corn Belt growing conditions, the Bloomberg Agriculture Spot Subindex is ending July essentially unchanged in 2018. Upside potential for the lowly agriculture sector appears to outweigh downside risks heading toward this year's finish line, supportive of a longer-term bottom.

### **Broad Agriculture Foundation**

Corn, Soybeans, Wheat Lead as Agriculture Weathers the Storm. The June storm that pressured agriculture prices may mark a longer-term low. Announced aid to U.S. farmers is supportive, but also indicative of the extent of price declines, notably in soybeans and corn. Most U.S. growers digging deeper into net-loss territory should limit production, while lower prices boost alreadystrong demand.

Agriculture at Support, With Positive Drivers. Grains drive the agriculture sector, and indications are that the worst of the price decline is over. Peaking global and U.S. stocks-to-use estimates for corn, soybeans and wheat contrast with the Bloomberg Agriculture Spot Index's two-year low in July. Trade tensions are distorting price declines, which should shift positively trending demand vs. supply conditions more favorably. The latest USDA global grains stocks-to-use estimate is the lowest in four years, accelerating a potential peak in the 12-month

average.



Global and U.S. stocks-to-use lead datasets with negative annual correlations to the Bloomberg Grains Subindex -- 0.62 since 1991. Continued dollar strength, a reversal of favorable demand vs. supply and higher stocks-to-use should be necessary to sustain July lows in the agriculture index.

Ag Prices Appear at Unsustainable Discount. The disparity in weak agriculture prices vs. demand in excess of supply and broad-commodity strength appears unsustainable. Since the end of 2015, the Bloomberg Commodity Spot Index has gained almost 30% vs. 3% for the agriculture index. Ags appeared to be on the path to recovery until trade tensions and exceptional U.S. growing conditions squashed the nascent recovery in June. The dip should just delay an eventual reversion recovery, as lower prices aggravate the demand vs. supply imbalance.

Strong Rally Reversion Potential in Agriculture

BCOMAGSP Index

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Study Simple MA 9 Period 12 0ffset 0

10 30 1M 6M YTD 1Y 5V Max Monthly 9 12 12 7 Table 6 Chart Content 7 Table 8

Normalized As 0f 12/31/2008

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Bibloomberg

Bloomberg Commodity Index (BCOM)

With the exception of soybeans, agriculture commodities are among the most expensive to store, so they're generally in contango, which is reflected in roll yields. Since 2015, the BCOM total return is almost 11% vs. minus 13% for the ags index. Steep crude-oil contango has been a drag on total returns, but is now in backwardation.

## **Recovering Grains**

Wheat's Recovery Portends Similar for Broader Grain Market. Risks of another failed wheat rally are diminishing, providing a firmer foundation for the broad grain market. Diminishing U.S. wheat acres and global production on adverse weather may reflect moresignificant trends in demand vs. supply and climate change reaching an inflection point. Corn companions indicate potential longer-term bottoming.

Wheat May Be Driving This Grain Recovery. The disparity between strong wheat prices and weak grain prices is unsustainable, supporting the grains. Wheat is at the greatest disparity above the Bloomberg Grains Spot Subindex on a month-end basis in eight years. The higher probability of some give appears to be a recovery in corn and soybean prices. Supported by adverse weather, notably in Europe, rallying wheat may be reflective of an inflection point reached between strong global grain demand and less-reliable supply.

**Higher Wheat Means Less Corn & Soybean Acres** 



The 100-year low (by some estimates) in U.S. wheatplanted acres reached in 2017 may have marked the bottom. Climate change has supported Corn Belt production but appears to be pressuring many of the global wheat-growing regions. Our graphic depicts a potential bottom head-and-shoulders pattern in the grains. Corn Bottom Strengthening the Foundation. Corn prices are showing signs of a potential longer-term bottom. Despite trade tensions, front-future prices are ending July with 2018 gains, and are up slightly in the December contract. U.S. stocks-to-use appears to be peaking from a 12-year high, with conditions about as good as they get. Planted acres have succumbed to more-profitable soybeans, making corn production increasingly dependent on higher yields. There's little room for improvement in conditions that reached the best in June since 1994.

Conditions & Stocks-to-Use Support Corn Prices

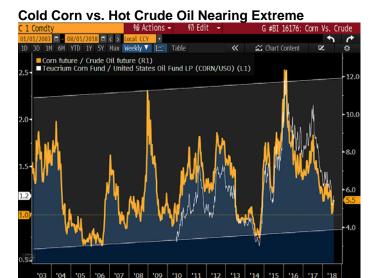


Technical indicators are positive. Despite nearing the end of the primary production month, prices have recovered to the 12-month mean after struggling in June with the near-perfect storm of trade issues, a plunging Brazilian real and exceptional growing conditions. Appreciation back toward 2017's high is more likely.

Too Low to Crude, Corn Nears Inflection Point. Corn appears too low vs. crude oil, and vice versa. Near the peak of the U.S. driving and growing seasons, the ratio of almost 4.8 of the front corn vs. crude oil futures is the lowest in four years. In September 2014, about 3.5 marked the ratio's bottom -- it peaked close to 12 less than two years later. Crude oil and corn represent opposite bullish and bearish extremes. WTI is on a tear, nearing four-year highs and the steepest in backwardation on a one-year basis, approaching 14%.

Corn is the opposite, about the same in contango, with prices unchanged from four years ago and without a premium for an adverse growing season. Despite rolling futures, the Teucrium Corn Fund (CORN) and United States Oil Fund (USO) ratio has closely tracked the spot futures ratio.

Bloomberg Commodity Index (BCOM)



Soybean Supply Should Decline Without Revenue.

Lows not seen since the financial crisis, and prices well below U.S. production costs, indicate conditions are about as bad as they get for soybeans. Our analysis of USDA data since 2006 shows U.S. soybean growers posting net losses approaching \$80 an acre, based on the July 13 front-future price of about \$8.35 a bushel. The December 2008 nadir was \$7.76. There's little production incentive.

The U.S. accounted for 40% of global soybean exports in 2017 vs. 43% for Brazil, with China accounting for 63% of all imports. Brazil, the go-to for China in the trade dispute, already exports about 75% of its crop compared with 50% for the U.S. Prices at decade lows prior to primary production in August should make them ripe for recovery on trade concessions.

# China Shares Contribute to Soybeans' Perfect Storm. U.S.-traded soybeans have entered a near-perfect storm, but it'll pass. It's more a question of time and extent of the

damage. Escalating trade tensions, the plunging Brazilian real and China stock market, and exceptional early U.S. growing-season conditions have pressured prices to 2008 financial crisis lows. Sustaining current levels implies a continuation of the stormy conditions, which is unlikely. With little incentive to produce or sell, U.S. farmers are more inclined to increase storage and reduce acres planted.



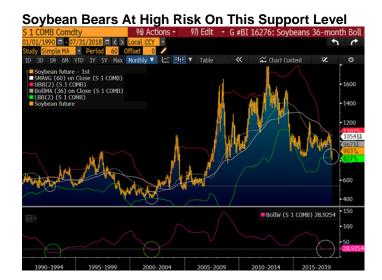
Soybean prices are 0.50 correlated to the MSCI China Index and 0.43 to the real/dollar cross rate over the past 20 years.

#### Soybean Risks Harken Back to 2001-02.

Recently visiting 10-year lows, soybeans should soon extend 2018's highs, if history is a guide. Charts can't predict things like a potential trade resolution, but they often depict conditions where markets are ripe for movement. Recovery is the typical path from similar support. Back at the bottom of the narrowest-for-longest soybean 36-month Bollinger Bands in about 16 years indicates a similar outcome. U.S. harvest time in 2001 was the last time soybeans were in a similar condition on a 36-month basis.

Poor harvests in 2002-03 supported the front-soybean future to peak 160% higher in 2004 as the 2001 high shifted to longer-term support. A big difference is the 2001 plunge was on good supply. The 2018 decline, due to prospects of decreased demand (exports), has removed much of the production-risk premium.

Bloomberg Commodity Index (BCOM)



Sugar has been the most consistent drag, leading agriculture decliners all year. Trade tensions, good U.S. growing conditions and the weak Brazilian real have reversed soybeans' strength to weakness, but the majority of the bean -- soybean meal -- remains supportive.

## **PERFORMANCE DRIVERS**

Summer Sizzle Keeping Wheat in the Black. Wheat, the grain that's sown in more countries than any other, may be an early indicator of shifting global weather patterns. Hot and dry conditions, mostly in Europe and Russia, are reducing production estimates, supporting Chicago and Kansas wheat as the best-performing major commodities of 2018. The U.S. is a top wheat exporter, selling abroad 56% of production in 2017. Drought in the Southwest is supporting cotton near four-year highs. A key difference is the shape of the one-year future curves - wheat remains in steep contango vs. backwardation in cotton.

Strong Wheat & Cotton and Hot & Dry Weather

Security	Chg YTD %	Chg	Chg	1Yr %	2Yr %
		July	QTD Pct	Chg	Chg
Bloomberg Wheat Subindex Total	+19.6%	+10.7%	+10.7%	-2.0%	-4.3%
Bloomberg Kansas Wheat Subinde	+19.5%	+14.1%	+14.1%		-6.1%
Bloomberg Cotton Subindex Tota	+16.5%	+6.9%	+6.9%	+33.2%	24.2%
BBG Soybean Meal TR	+5.8%	+3.7%	+3.7%	+1.6%	-9.7%
Bloomberg Grains Subindex Tota	+2.9%	+6.5%	+6.5%	-9.3%	-11.2%
Bloomberg Corn Subindex Total	+.4%	+3.7%	+3.7%	-11.5%	-12.1%
Bloomberg Agriculture Subindex	-3.2%	+2.7%	+2.7%	-11.7%	-16.4%
Bloomberg Live Cattle Subindex	-4.1%	+.2%	+.2%	-4.9%	6.7%
Bloomberg Soybeans Subindex To	-7.5%	+4.6%	+4.6%	-13.2%	-16.3%
Bloomberg Livestock Subindex T	-9.2%	-4.3%	-4.3%	-8.9%	1.1%
Bloomberg Soybean Oil Subindex	-14.4%	-1.3%	-1.3%	-19.4%	-11.8%
Bloomberg Coffee Subindex Tota	-16.5%	-4.4%	-4.4%	-27.8%	-37.2%
BBG Softs TR	-16.8%	-5.7%	-5.7%	-19.1%	-32.3%
Bloomberg Lean Hogs Subindex T	-20.5%	-13.5%	-13.5%	-18.2%	-11.6%
Bloomberg Sugar Subindex Total	-31.3%	-13.7%	-13.7%	-32.4%	-49.0%

# **DATA on BI COMD**

# **Performance - Overview**

**Key Metrics** 

Name	% Change on 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
■ Commodities										
■ BCOM Index TR	0.0	0.7	-2.1	-2.1	-4.2	-2.1	2.7	3.5	-4.7	-30.7
■ Energy Index	-1.5	-0.5	-4.4	-4.4	8.0	7.8	23.2	23.0	-15.8	-54.2
■ All Metals Index	0.6	0.6	-3.8	-3.8	-6.9	-8.8	0.6	4.4	17.2	-5.6
■ Industrial Metals Index	1.0	0.9	-4.7	-4.7	-7.0	-9.8	5.4	25.0	23.2	-1.2
■ Precious Metals Index	0.2	0.2	-2.7	-2.7	-6.8	<b>-7.</b> 5	-5.1	-15.2	7.6	-13.7
■ Ags & Livestock Index	0.9	1.9	1 <b>.</b> 5	1.5	-6.2	<b>-4.</b> 3	-11.2	-13.7	-15.0	-32.5
■ Livestock Index	-0.6	-0.8	-4.3	-4.3	0.5	-9.2	-8.9	1.1	-14.9	-15.4
Agriculture Index	1.2	2.4	2.7	2.7	-7 <b>.</b> 5	-3.2	-11.7	-16.4	-15.5	-35.7
■ Grains Index	1.9	3.7	6.5	6.5	-6.7	2.9	-9 <b>.</b> 3	-11.2	-21.3	-41.2
■ Softs Index	-1.3	-1.0	-5 <b>.</b> 7	-5.7	-7.0	-16.8	-19.1	-32.3	-10.4	-39.1
■ BCOM EX Indices TR										
■ BCOM Index Roll Select TR	0.1	0.7	-1.9	-1.9	-4.1	-1.9	2.7	6.3	1.3	-24.0
■ BCOM Index Forwards TR										
■ BCOM Index ER	0.0	0.7	-2.3	-2.3	-4.7	-3.1	1.2	1.3	-7.0	-32.3
■ BCOM Index Spot	0.0	0.7	-2.6	-2.6	-4.7	-1.5	6.0	15.0	17.0	-10.5
■ Stocks										
■ S&P 500 Index TR	0.5	-0.1	3.7	3.7	6.9	6.5	16.2	34.9	42.5	85.3
■ Bonds										
■ Barclays U.S. Aggregate	0.0	0.0	-0.1	-0.1	0.5	-1.7	-0.9	-1.4	4.4	11.7
■ Currencies										
■ Bloomberg U.S. Dollar Spot Index	0.1	-0.1	-0.6	-0.6	2.4	1.3	1.8	-0.5	-2.8	14.5
US Dollar Index	0.2	-0.1	0.1	0.1	2.9	2.6	1.8	-1.0	-2.9	16.1
Pound Index	0.0	0.0	-0.5	-0.5	-3.0	-1.6	0.2	-2.8	-20.8	-8.8

Name	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ Commodities										
■ BCOM Index TR	-2.2%	1.7%	11.8%	-24.7%	-17.0%	-9 <b>.</b> 5%	-1.1%	-13.3%	16.8%	18.9%
■ Energy Index	9.4%	-4.3%	16.3%	-38.9%	-39.3%	5.2%	-9.4%	-16.0%	-10.5%	-5.3%
■ All Metals Index	-9.4%	20.8%	15.7%	-19.5%	-7.1%	-21.6%	2.9%	-11.5%	25.9%	60.2%
■ Industrial Metals Index	-10.7%	29.4%	19.9%	-26.9%	-6.9%	-13.6%	0.7%	-24.2%	16.2%	80.0%
■ Precious Metals Index	-7.7%	10.9%	9.5%	-11.5%	-6.7%	-30.8%	6.3%	4.6%	42.7%	29.2%
■ Ags & Livestock Index	-5.2%	-8.1%	0.9%	-16.1%	-6.0%	-12.6%	2.7%	-12.4%	33.9%	7.9%
■ Livestock Index	-8.7%	6.4%	-5.6%	-18.8%	11.6%	-3.5%	-3.5%	-2.3%	9.3%	-15.1%
■ Agriculture Index	-4.4%	-11.0%	2.1%	-15.6%	-9.2%	-14.3%	4.0%	-14.4%	38.5%	13.7%
<b>■</b> Grains Index	1.0%	-11.3%	-5 <b>.</b> 9%	-19.4%	-9.4%	-16.9%	18.3%	-14.4%	30.3%	-1.6%
■ Softs Index	-15.7%	-14.8%	13.2%	-9 <b>.</b> 9%	-10.1%	-16.9%	-22.4%	-14.0%	59 <b>.</b> 9%	44.2%
■ BCOM EX Indices TR										
■ BCOM Index Roll Select TR	-1.9%	3.6%	14.6%	-23.4%	-15.2%	-9.1%	-0.4%	-8.8%	19.5%	23.1%
■ BCOM Index Forwards TR										
■ BCOM Index ER	-3.2%	0.7%	11.4%	-24.7%	-17.0%	-9.6%	-1.1%	-13.4%	16.7%	18.7%
■ BCOM Index Spot	-1.5%	7.6%	23.1%	-18.4%	-17.0%	-8.7%	3.7%	-8.1%	26.4%	41.2%
■ Stocks										
■ S&P 500 Index TR	5.9%	21.8%	12.0%	1.4%	13.7%	32.4%	16.0%	2.1%	15.1%	26.5%
■ Bonds										
■ Barclays U.S. Aggregate	-1.7%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%
■ Currencies										
■ Bloomberg U.S. Dollar Spot Index	1.2%	-8.5%	2.8%	9.0%	11.0%	3.3%	-0.7%	1.8%	-1.8%	-4.8%
US Dollar Index	2.4%	-9.9%	3.6%	9.3%	12.8%	0.3%	-0.5%	1.5%	1.5%	-4.2%
Pound Index	-4.4%	11.6%	-30.3%	-5.7%	-4.3%	3.9%	8.7%	-0.5%	-6.6%	17.3%

# **Performance – Commodity Total Returns Key Metrics**

Name	% Change on Day						
■ BCOM Total Return Indices							
Wheat Index	1.3	4.4	10.7	5.7	19.6	-2.0	-4.3
HRW Wheat Index	1.6	4.5	14.1	1.0	19.5	-2.0	-6.1
WTI Crude Index	-1.9	0.1	-4.9	1.5	17.1	39.3	47.8
Cotton Index	0.4	1.4	6.9	9.6	16.5	33.2	24.2
Brent Crude Index	-1.8	-0.8	-5.7	1.3	16.0	49.2	61.4
Nickel Index	1.2	1.2	-5.9	2.7	9.8	36 <b>.</b> 5	29.1
Heating Oil Index	-1.8	-1.0	-3.4	-0.1	6.4	31.4	52.0
Gasoline Index	-1.5	-1.5	-2.2	-0.3	6.2	24.1	45.9
Soybean Meal Index	2.3	3.1	3.7	-13.8	5.8	1.6	-9.7
Corn Index	1.4	2.9	3.7	-8.9	0.4	-11.5	-12.1
Live Cattle Index	-0.4	-1.0	0.2	3.3	-4.1	-4.9	6.7
Aluminum Index	-0.7	0.4	-2.5	-6.9	-6.7	9.6	25.2
Natural Gas Index	-0.5	0.0	-3.9	8.0	-6.7	-14.4	-35.2
Gold Index	0.2	0.1	-2.4	- <b>7.</b> 3	-6.8	-4.1	-11.0
Soybeans Index	3.1	3.8	4.6	-13.8		-13.2	-16.3
Silver Index	0.1	0.4	-3.8	-5.1	-9.6	-8.2	-25.6
Platinum Index	1.7	1.7	-1.2	-6 <b>.</b> 5	-9.9	-10.4	-27.3
Soybean Oil Index	1.6	1.0	-1.3	-6.1	-14.4	-19.4	-11.8
Copper Index	1.4	1.1	-4.4	-8.0		-3.7	23.0
Coffee Index	-1.3	-0.5	-4.4		-16.5	-27.8	-37.2
Zinc Index	2.7	1.2	-7.7	-15.1	-19.5	-3.2	18.8
Lean Hogs Index	-1.0	-0.3	-13.5	-6.3	-20.5	-18.2	-11.6
Sugar Index	-2.5	-3.0	-13.7	-11.8	-31.3	-32.4	-49.0

Name	2018↓	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ BCOM Total Return Indices	20104	2017	2010	2015	2011	2015	2012	2011	2010	2007
WTI Crude Index	19.5%	5.1%	7.1%	-44.3%	-41.7%	6.8%	-11.8%	-3.6%	3.8%	4.4%
Brent Crude Index	18.1%	14.2%	25.4%	-45.6%	-47.6%	7.2%	7.6%	16.8%	11.5%	28.6%
Wheat Index	18.0%	-12.5%	-24.1%	-22.2%	-9.4%	-27.2%	9.8%	-34.0%	21.2%	-26.0%
HRW Wheat Index	17.6%	-14.9%	-25.3%	-32.7%	-4.7%	-26.2%	5.6%	-22.9%	42.1%	-23.8%
Cotton Index	15.9%	12.5%	10.5%	3.0%	-21.2%	9.0%	-12.7%	-21.7%	98.2%	30.1%
Nickel Index	8.5%	25.6%	11.8%	-42.6%	7.3%	-20.1%	-10.2%	-24.7%	32.2%	54.9%
Heating Oil Index	8.4%	15.0%	33.5%	-42.8%	-38.8%	0.4%	5.5%	10.7%	8.3%	20.5%
Gasoline Index	7.9%	2.8%	6.4%	-12.6%	-43.8%	1.9%	25.7%	14.5%	13.1%	74.7%
Soybean Meal Index	3.4%	-4.8%	18.1%	-18.0%	11.8%	20.0%	49.1%	-18.1%	38.9%	34.7%
Corn Index	-1.0%	-12.1%	-9.8%	-19.2%	-13.3%	-30.3%	19.0%	1.1%	30.7%	-10.1%
Live Cattle Index	-3.7%	9.1%	-7.4%	-14.3%	22.1%	-5.0%	-3.9%	-1.0%	15.0%	-9.8%
Aluminum Index	-6.1%	31.2%	9.7%	-22.9%	-3.1%	-20.7%	-4.0%	-21.7%	5.4%	33.8%
Natural Gas Index	-6.2%	-36.4%	10.3%	-39.9%	-30.7%	5.0%	-30.6%	-47.1%	-40.6%	-51.6%
Gold Index	-7.0%	12.8%	7.7%	-10.9%	-1.7%	-28.7%	6.1%	9.6%	28.7%	22.9%
Silver Index	-9.7%	5.8%	14.0%	-12.7%	-20.4%	-36.6%	7.1%	-10.1%	81.8%	47.6%
Soybeans Index	-10.3%	-8.1%	14.8%	-14.6%	-5.5%	10.5%	24.0%	-16.4%	34.9%	22.9%
Platinum Index	-11.4%	3.0%	0.8%	-26 <b>.</b> 5%	-12.3%	-11.8%	8.7%	-21.8%	19.3%	54.0%
Coffee Index	-15.4%	-16.0%	-1.3%	-31.5%	37.8%	-30.5%	-41.6%	-11.2%	67.0%	10.3%
Soybean Oil Index	-15.7%	-7.0%	7.3%	-7.7%	-20.6%	-22.4%	-9.8%	-15.2%	33.8%	14.2%
Copper Index	-16.1%	29.2%	15.7%	-25.1%	-16.6%	-8.8%	5.0%	-24.4%	29.5%	130.0%
Lean Hogs Index	-19.7%	2.8%	-2.9%	-26.1%	-4.4%	-2.0%	-2.9%	-4.6%	0.3%	-22.5%
Zinc Index	-21.6%	29.7%	57 <b>.</b> 5%	-28.0%	3.5%	-7.0%	9.0%	-27.8%	-8.8%	98.3%
Sugar Index	-29.6%	-25.4%	22.8%	-4.7%	-30.9%	-20.0%	-13.0%	-11.9%	24.0%	86.3%

**Performance – Prices Key Metrics** 

Name	% Change on Day	WTD % Change	MTD % Change				
BCOM Single Commodity Pr							
Brent Crude	-1.0	-0.1	-6.5	-1.2	11.0	41.0	74.9
Nickel	1.2	1.2	-5.9	2.6	9.7	37.1	31.7
WTI Crude	-2.4	-0.4	-7.7	-0.2	13.3	36.4	64.5
Gas Oil	-2.0	-2.5	-3.9	-1.0	8.2	32.8	74.9
Heating Oil	-1.8	-1.1	-3.5	-1.6	2.7	29.1	67.1
Cotton	0.4	1.4	5.7	6.6	14.8	28.1	21.7
Gasoline	-1.4	-1.5	-2.3	0.0	18.3	24.8	61.2
HRW Wheat	1.6	4.5	18.2	7.3	30.3	17.2	35.8
Wheat	1.3	4.4	11.3	8.0	29.7	16.7	35.8
Aluminum	-0.6	0.4	-4.5	-8.7	-8.5	8.8	26.3
Soybean Meal	2.2	2.6	2.5	-13.0	9.1	7.1	-2.5
Palladium	0.7	1.2	-2.3	-3.3	-12.4	4.9	30.9
Corn	1.4	2.8	6.3	-5.2	6.1	0.4	11.3
Natural Gas	-0.6	-1.5	-4.9	0.7	-5.8	-0.5	-3.3
Copper (LME)	0.9	0.0	-5.3	-7.2	-12.9		
Copper (CME)	1.2	0.9	-4.2	-7.4	-14.4		27.2
Gold	0.1	0.0	-2.5	-7 <b>.</b> 3	-6.6		
Live Cattle	-0.7	-0.9	0.9	1.5	-11.4		-4.8
Zinc	2.7	1.2	-8.8	-15.7	-21.0	-5.4	
Silver	0.1	0.3	-3.5	-4.7	-9.3	-7.4	-23.6
Soybeans	3.3	3.8	5.3	-12.9	-5.0		
Platinum	1.1	1.1	-1.3	-7.0	-10.0	-10.6	
Soybean Oil	1.5	0.6	-1.3	-5.3		-17.2	
Coffee	-1.3	-0.5	-1.4	-8.9	-12.9	-21.1	
Lean Hogs	-3.4	-4.0	-26.2	-7.8	-14.8	-23.9	
Sugar	-2.5	-3.0	-11.0	-8.4	-30.4	-29.2	-44.6

Name	2018↓	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ BCOM Single Commodity Price										
HRW Wheat	29.7%	2.1%	-10.7%	-25.2%	-2.2%	-22.9%	15.9%	-15.7%	58.7%	-14.9%
Wheat	28.2%	4.7%	-13.2%	-20.3%	-2.6%	-22.2%	19.2%	-17.8%	46.7%	-11.3%
Gasoline	17.8%	8.1%	31.4%	-11.7%	-48.5%	-0.9%	4.7%	9.5%	19.5%	103.6%
WTI Crude	15.4%	12.5%	45.0%	-30.5%	-45.9%	7.2%	-7.1%	8.2%	15.1%	77.9%
Cotton	14.4%	11.3%	11.6%	5.0%	-28.8%	12.6%	-18.1%	-36.6%	91.5%	54.2%
Brent Crude	12.0%	17.7%	52.4%	-35.0%	-48.3%	-0.3%	3.5%	13.3%	21.6%	70.9%
Gas Oil	9.0%	19.8%	53.6%	-36.3%	-45.8%	1.9%	0.3%	21.2%	20.0%	51.9%
Nickel	8.4%	27.5%	13.5%	-41.8%	9.0%	-18.6%	-9.2%	-24.2%	33.8%	58.8%
Soybean Meal	7.3%	-0.1%	18.4%	-27.5%	-16.7%	4.1%	35.9%	-16.4%	18.0%	4.5%
Corn	5.3%	-0.4%	-1.9%	-9.6%	-5.9%	-39.6%	8.0%	2.8%	51.7%	1.8%
Heating Oil	4.1%	21.8%	54.8%	-40.4%	-40.0%	1.1%	3.8%	15.4%	20.1%	50.7%
Natural Gas	-6.0%	-20.7%	59.3%	-19.1%	-31.7%	26.2%	12.1%	-32.1%	-20.9%	-0.9%
Gold	-6.9%	13.7%	8.6%	-10.5%	-1.5%	-28.3%	7.0%	10.2%	29.7%	24.0%
Soybeans	-7.3%	-4.5%	14.4%	-14.5%	-22.3%	-7.5%	18.4%	-14.0%	34.0%	6.9%
Aluminum	-7.9%	33.3%	12.5%	-17.9%	4.1%	-13.9%	2.5%	-18.8%	11.6%	45.6%
Silver	-9.6%	7.2%	15.8%	-11.5%	-19.5%	-35.9%	8.3%	-9.8%	83.7%	49.1%
Platinum	-10.6%	3.6%	1.1%	-26.2%	-11.8%	-10.9%	9.9%	-21.1%	21.5%	55.9%
Live Cattle	-10.8%	4.7%	-15.2%	-16.4%	21.5%	1.8%	8.9%	12.1%	25.9%	0.0%
Lean Hogs	-11.8%	8.5%	10.6%	-26.4%	-4.9%	-0.3%	1.7%	5.7%	22.3%	7.1%
Coffee	-12.6%	-7.9%	8.2%	-23.9%	50.5%	-23.0%	-36.6%	-5.7%	76.9%	21.3%
Palladium	-12.8%	55.3%	21.6%	-29.6%	11.2%	2.1%	7.2%	-18.3%	96.5%	116.7%
Copper (LME)	-13.6%	30.6%	17.3%	-25.8%	-13.9%	-6.8%	4.2%	-21.2%	31.2%	141.1%
Soybean Oil	-13.8%	-3.9%	12.7%	-4.4%	-17.6%	-21.0%	-5.6%	-9.8%	43.1%	21.2%
Copper (CME)	-15.5%	31.7%	17.4%	-24.4%	-16.8%	-7.0%	6.3%	-22.7%	32.9%	137.3%
Zinc	-23.0%	30.1%	60.2%	-26.2%	6.0%	-0.5%	12.2%	-25.2%	-3.5%	113.5%
Sugar	-29.1%	-22.3%	28.0%	5.0%	-11.5%	-15.9%	-16.3%	-27.5%	19.2%	128.2%

**Performance – Volatility** 

renormance - vo									
Name	Current	% Change on Day	WTD % Change	MTD % Change	1 Mth % Change	3 Mth % Change	YTD % Change	1 Yr % Change	2 Yr % Change
■ BCOM 3M Implied Volatility					5				
Aluminum	19.6	11.5	-2.6	-8.6	-8.6	-7.1	16.7	32.4	11.6
Brent Crude	26.1	3.3	5.2	5.1	5.1	5.5	37.6	-9 <b>.</b> 5	-37.5
Live Cattle	17.2	-1.8	-0.6	-13.1	-13.1	-17.4	-7.7	-18.7	-17.3
Copper (COMEX)	20.8	2.0	2.5	20.7	20.7	15.1	20.6	37.1	5.6
Coffee	21.0	-2.2	1.0	22.9	22.9	-13.0	-11.7	-24.6	-35.5
Corn	21.2	0.0	5.9	-10.3	-10.3	-19.2	66.4	1.0	-11.9
Cotton	23.7	0.9	4.3	-1.0	-1.0	14.5	4.7	22.9	-2.5
Crude Oil	24.5	0.0	0.3	0.9	0.9	-1.6	29.4	-16.1	-39.4
Gas Oil	23.5	1.1	-0.2	1.8	1.8	5.5	24.0	-2.5	-36.0
Gold	9.6	4.0	0.7	0.4	0.4	-2.9	0.3	-14.1	-37.1
Heating Oil	23.4	3.5	7.3	2.1	2.1	8.1	24.5	-0.4	-34.5
HRW Wheat	30.8	0.8	2.9	27.7	27.7	1.5	52.0	36.9	31.7
Copper (LME)	19.6	15.9	-0.9	5.7	5.7	2,460.6	10.3	23.2	54.4
Lean Hogs	40.3	1.0	1.4	51.2	51.2	70.5	94.4	41.1	21.4
NaturalGas	21.8	0.6	3.2	4.3	4.3	5.7	-36.2	-28.3	-43.2
Nickel	27.2	-14.1	-12.6	-16.2	-16.2	-28.7	-3.6	2.2	8.1
Palladium	22.2	-1.8	-4.3	2.6	2.6	-9.2	-2.3	-1.2	-17.0
Platinum	16.0	1.2	-2.0	-2.7	-2.7	4.9	22.2	7.4	-18.5
Silver	16.3	3.7	-0.8	0.3	0.3	-9.6	5.1	-16.1	-42.3
Soybeans	21.1	2.1	1.1	-9.1	-9.1	6.6	86.9	10.5	-16.0
Soybean Meal	20.9	3.0	3.6	-12.4	-12.4	-20.4	36.3	-3.9	-26.8
Soybean Oil	16.2	0.0	-0.1	0.8	0.8	6.3	5.0	-22.5	-18.8
Sugar	25.4	0.0	2.0	1.0	1.0	2.1	17.3	4.0	-18.1
Unlead Gas	25.6	4.5	5.3	5.9	5.9	9.1	27.7	-5.8	-40.3
Wheat	29.8	-1.2	1.0	22.9	22.9	9.4	49.3	31.9	22.9
Zinc	24.6	-4.0	-14.2	-2.2	-2.2	-52.7	15.9	12.1	12.0
■ BCOM 60 Day Historical Volatility									
Aluminum	19.5	-0.2	-9.4	-47.2	-47.2	-45.9	14.8	66.0	14.0
Brent Crude	28.7	-2.4	-2.9	14.6	14.6	16.3	42.2	0.1	-23.4
Live Cattle	38.1	-1.1	-0.6	9.6	9.6	18.1	101.0	18.8	64.9
Copper (CME)	19.7	1.4	1.4	13.0	13.0	-1.0	1.5	28.5	-1.6
Coffee	25.7	-0.5	-0.8	21.8	21.8	40.3	13.8	-13.8	-20.2
Corn	25.6	0.2	1.1	26.8	26.8	68.2	85.2	0.4	-24.6
Cotton	27.0	0.0	-1.2	3.7	3.7	26.6	45.0	-19.0	11.7
Crude Oil	30.0	0.4	0.6	11.9	11.9	17.6	43.2	1.5	-19.3
Gas Oil	21.7	-6.3	-8.3	-10.5	-10.5	-3.6	9.1	-15.1	-35.4
Gold	9.1	0.3	0.1	-6.8	-6.8	-26.6	-12.2	-13.1	-45.3
Heating Oil	25.4	0.3	-0.7	9.8	9.8	16.0	18.0	1.8	-31.8
HRW Wheat	38.1	-1.1	-0.7	9.6	9.6	18.1	101.0	18.8	44.5
	17.8	-0.2	0.2	6.6	6.6	-6.5	-7 <b>.</b> 9		-9.1
Copper (LME)	49.6			-18.0		-15.7		30.8	
Lean Hogs		0.9	0.9		-18.0		60.3	35.2	79.9
Natural Gas	21.5	-0.4	-0.1	-4.3	-4.3	-9.1	-53.4	-36.1	-54.3
Nickel Gas	23.2	0.2	-1.2	-20.3	-20.3	-27.8	-34.1	5.6	-30.3
Palladium	23.5	0.3	0.4	-11.1	-11.1	-20.4	26.5	16.5	-13.8
Platinum	21.7	1.6	1.5	31.5	31.5	31.0	27.0	10.7	-4.5
Silver	17.4	0.0	0.2	-10.6	-10.6	-10.1	-6.7	-6.8	-23.9
Soybeans	22.8	3.1	2.7	25.7	25.7	44.3	78.1	16.5	-29.7
Soybean Meal	17.8	0.6	0.6	-6.9	-6.9	-22.2	7.3	-17.3	-49.0
Soybean Oil	15.7	2.2	2.7	16.2	16.2	9.1	12.3	-9.7	-29.8
Sugar	27.4	1.0	0.5	-6.2	-6.2	-4.7	15.6	-22.2	-13.7
Unlead Gas	27.1	0.4	0.0	22.0	22.0	-0.9	12.5	1.0	-25.1
Wheat	37.3	-0.9	-0.5	4.6	4.6	18.1	75.4	15.3	34.3
Zinc	24.1	3.4	2.1	9.2	9.2	8.2	15.7	25.9	2.5

Bloomberg Commodity Index (BCOM)

Curve Analysis – Contango (-) | Backwardation (+) Key Metrics

rtey well ics								
Name	Current Position	1 Yr Ago	1 Yr Change	YTD Change	MTD Change	1 Mth Change	3 Mth Change	2 Yr Change
■ 1 Year Spread % of First Contract								
■ BCOM	-3.6	-3.0	-0.6	-1.9	-1.4	-1.4	-1.3	1.3
■ Sector								
■ Energy	4.1	2.0	2.1	-0.2	-2.1	-1.8	-2.0	15.0
■ Industrial Metals	-1.5	-1.6	0.2	-0.7	-1.2	-1.2	-0.6	-0.4
■ Precious Metals	-2.8	-2.0	-0.8	-0.5	0.2	0.2	0.3	-1.2
■ Agriculture	-6.6	-6.7	0.1	-0.6	1.0	1.0	-0.9	-3.0
■ Livestock	-9.9	3.7	-13.6	-16.4	-14.1	-14.1	-0.9	-11.0
■ Single Commodities								
Thermal Coal	11.4	10.6	0.7	5.9	-0.8	1.0	4.5	
Cotton	7.5	3.6	3.8	1.4	5.7	5.7	0.4	5.4
Crude Oil	6.7	-0.7	7.4	1.7	-5.4	-5.4	-2.2	20.3
Natural Gas	5.1	-0.4	5.5	8.8	-2.5	-2.5	-1.5	12.3
Unleaded Gas	3.6	3.0	0.5	-1.1	0.3	0.3	-1.2	13.6
Brent Crude	2.5	-1.6	4.1	-3.9	-4.2	-4.2	-5.6	15.9
Soybean Meal	1.9	-3.4	5.3	5.3	-0.9	-0.9	-6.5	-4.8
Zinc	1.7	0.3	1.4	-1.8	-1.4	-1.4	0.6	1.6
Palladium	1.0	2.1	-1.1	-0.5	-0.2	-0.2	-0.5	1.4
Gas Oil	-0.2	1.5	-1.6	-6.4	-1.1	-1.1	-4.5	14.7
Heating Oil	-0.3	1.3	-1.6	-6.2	-0.6	-0.6	-3.6	12.9
Copper (LME)	-1.3	-1.5	0.2	0.0	-0.7	-0.7	0.5	-0.6
Platinum	-1.7	-1.4	-0.3	-0.3	0.2	0.2	0.3	-1.2
Nickel	-2.2	-2.1	-0.1	-0.2	-0.6	-0.6	-0.7	-0.8
Aluminum	-2.6	-2.7	0.2	-0.3	-3.2	-3.2	-3.5	-0.4
Gold	-2.7	-1.6	-1.1	-0.6	0.2	0.2	0.2	-1.1
Silver	-2.9	-2.4	-0.6	-0.4	0.2	0.2	0.4	-1.2
Copper (CME)	-3.0	-2.2	-0.8	-1.2	-0.3	-0.3	0.3	-1.5
Live Cattle	-3.7	2.8	-6.6	-10.1	-0.5	-0.5	4.5	-11.6
Soybean	-5.7	-3.2	-2.4	-2.4	0.4	0.4	-6.6	-11.1
Soybean Oil	-6.6	-2.3	-4.3	-5.5	-0.4	-0.4	-0.1	-2.1
Wheat	-8.2	-16.4	8.2	7.3	2.0	2.0	3.0	12.4
Corn	-9.1	-10.6	1.5	3.0	3.4	3.4	-0.2	0.6
HRW Wheat	-10.4	-18.3	7.9	8.7	6.7	6.7	5.2	8.7
Coffee	-12.6	-9.6	-2.9	-1.6	1.2	1.2	-1.5	-5.3
Sugar	-15.3	-7.2	-8.1	-11.8	-6.6	-6.6	-1.6	-20.0
Lean Hogs	-16.2	4.5	-20.7	-22.8	-27.6	-27.6	-6.3	-10.3

Lean Hogs | -16.2 | 4.5 | -20.7 | -22.8 | -27.6 | -27.6 | -6.3 | -10.3 |

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	2018↓	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ 1 Year Spread % of First Contract										
■ BCOM	-3.6	-1.7	-2.2	-7.1	-4.4	0.3	-0.9	-2.0	2.3	-4.1
■ Sector										
■ Energy	4.3	4.3	0.4	-14.0	-11.3	3.5	-1.3	-2.5	-2.1	-9.4
■ Industrial Metals	-1.5	-0.8	-0.8	-1.5	-0.8	-1.8	-2.5	-2.1	0.5	-2.3
■ Precious Metals	-2.8	-2.3	-1.7	-1.0	-0.8	-0.7	-0.7	-0.7	-0.9	-0.9
■ Agriculture	-6.5	-5.9	-4.2	-5.5	-5.6	-1.5	-2.3	-1.8	12.2	-0.3
■ Livestock	-9.6	6.5	8.1	0.6	8.3	4.1	-0.7	-0.2	-1.8	-4.8
■ Single Commodities										
Thermal Coal	12.2	5.4	18.4	14.0	1.7	1.9	-8.3	-6.2	11.2	-7.9
Cotton	8.3	6.1	1.7	-2.7	-8.6	6.7	-5.7	3.6	34.6	-2.6
Crude Oil	7.2	5.0	-5.9	-20.4	-13.5	7.3	-1.3	1.4	-3.2	-6.7
Natural Gas	5.1	-3.7	-0.1	-22.6	-22.2	-3.2	-20.7	-29.9	-18.4	-21.1
Unleaded Gas	4.4	4.7	2.8	1.0	-12.3	7.0	9.8	7.9	3.7	-2.9
Soybean Meal	1.9	-3.4	-0.4	-5.7	9.8	19.9	12.5	-2.4	9.9	9.5
Zinc	1.6	3.4	0.2	-2.8	-1.4	-2.3	-4.5	-3.9	-1.7	-3.2
Brent Crude	1.5	6.3	-3.1	-22.1	-16.4	4.9	6.3	4.0	-0.4	-8.3
Palladium	1.0	1.5	-0.5	-0.2	-0.1	-0.5	-0.2	-0.4	0.0	-0.3
Gas Oil	0.0	6.2	-4.8	-23.8	-12.0	3.1	2.9	3.0	-4.2	-11.0
Heating Oil	0.0	5.9	-4.5	-24.5	-4.5	3.2	2.1	2.1	-3.4	-8.0
Copper (LME)	-1.3	-1.3	-0.3	0.3	1.6	1.1	-0.7	-0.3	2.7	-0.9
Platinum	-1.8	-1.4	-1.1	-0.4	-0.4	-0.5	-0.7	-1.0	-0.5	-1.2
Nickel	-2.2	-2.0	-1.9	-1.4	-1.1	-1.8	-1.4	-0.1	1.1	-1.1
Aluminum	-2.5	-2.3	-1.0	-2.7	-3.1	-7.5	-5.0	-5.2	-2.3	-5.0
Gold	-2.7	-2.2	-1.5	-0.5	-0.3	-0.4	-0.7	-0.9	-0.9	-1.0
Silver	-2.9	-2.5	-2.0	-1.4	-1.2	-0.9	-0.7	-0.5	-0.9	-0.8
Live Cattle	-3.0	6.3	13.3	8.1	7.0	2.5	-3.3	-4.5	-3.8	-4.3
Copper (CME)	-3.2	-1.8	-0.8	-1.1	-0.2	1.3	-1.1	-0.8	2.5	-1.2
Soybean	-6.2	-3.3	0.4	-2.0	0.9	13.1	7.7	-1.2	5.9	1.7
Soybean Oil	-6.6	-1.1	-1.2	-3.1	-0.9	-3.8	-2.8	-1.6	-0.9	-5.3
Wheat	-8.6	-15.5	-17.1	-10.5	-5.0	-7.2	-6.9	-12.4	-8.7	-15.3
Corn	-9.1	-12.1	-10.5	-9.5	-8.1	-9.2	12.7	7.2	9.4	-8.5
HRW Wheat	-10.4	-19.1	-16.1	-14.9	-6.3	-5.5	-5.7	-7.9	-3.1	-12.7
Coffee	-12.3	-10.9	-9.2	-8.4	-7.4	-11.2	-11.5	-4.9	6.1	-5.7
Sugar	-15.3	-3.5	4.8	0.9	-13.1	-8.2	-5.5	-0.3	26.0	21.9
Lean Hogs	-16.2	6.7	2.9	-7.0	9.6	5.7	2.0	4.2	0.2	-5.3

Bloomberg Commodity Index (BCOM)

Curve Analysis – Gross Roll Yield Key Metrics

Name	Current	Yld 6	Yld 1 Yr	Change	Yld 2 Yr	Change
name		Months Ago	Ago	from 1 Yr	Ago	from 2 Yr
			90	Ago	9-	Ago
■ 1 Year Gross Yield						
■ Sector Roll Yield						
BCOM Livestock	0.1	0.2	4.0	-3.9	1.8	-1.6
BCOM Industrial Metals	0.1	-2.2	-1.7	1.8	-2.4	2.5
BCOM Precious Metals	-1.0	-0.7	-1.5	0.5	-1.0	0.0
BCOM Energy	-1.0	-10.6	-12.4	11.4	-20.5	19.5
BCOM	-3.3	-5.3	-7.9	4.6	-9.7	6.4
BCOM Softs	-3.3	-3.1	-4.1	8.0	-9.6	6.3
BCOM Grains	-11.4	-12.7	-7.8	-3.6	-5.0	-6.4
BCOM Agriculture		-7.5	-7.8			
■ Commodities Roll Yield						
Brent Crude	10.9	-3.4	-12.5	23.4	-16.3	27.2
Gas Oil	9.6	0.2	-11.1	20.6	-12.2	21.8
Lean Hogs	7.7	-5.1	-11.1	18.8	-0.4	8.1
Cotton	4.3	-0.8	-2.3	6.6	-1.1	5.4
Heating Oil	3.5	-2.8	-12.5	16.0	-10.0	13.5
Crude Oil	2.9	-6.0	-15.1	18.0	-25.3	28.2
Zinc	2.8	-1.2	-2.8	5.5	-3.7	6.4
Aluminum	1.4	-3.6	-1.0	2.4	-5.7	7.1
Unlead Gas	0.2	-5.5	-9.7	10.0	-5.9	6.1
Platinum	0.2	-0.9	-0.7	0.9	-0.2	0.4
Soybean Oil	-0.2	-4.2	-2.6	2.5	-4.9	4.7
Gold	-0.7	-1.4	-1.1	0.4	-0.2	-0.5
Silver	-0.8	-1.7	-1.5	0.7	-1.5	0.8
Soybean	-0.9	-5.0	4.3	-5.2	1.1	-2.0
Copper (CME)	-1.1	-2.7	-2.4	1.3	-1.2	0.1
Nickel	-1.6	-5.9	-2.3	0.7	-4.1	2.5
Sugar	-3.0	-3.7	-1.9	-1.1	-14.6	11.6
Soybean Meal	-5.5	-4.8	-2.2	-3.3	9.0	-14.5
Coffee	-5.9	-7.4	-6.7	0.7	-11.0	5.0
Corn	-9.9	-13.8	-8.8	-1.0	-7.0	-2.9
Natural Gas	-13.6	-17.1	-23.2	9.6	-35.8	22.2
Wheat	-15.9	-20.2	-18.2	2.3	-4.7	-11.2
HRW Wheat	-17.2	-20.3	-20.0	2.7	-11.7	-5.5

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

i iistoi icai										
Name	2018↓	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ 1 Year Gross Yield										
Sector Roll Yield										
BCOM Livestock	0.1	0.5	0.2	1.1	-0.2	-4.5	-9.8	-12.3	-14.8	-20.2
BCOM Industrial Metals	-0.8	-3.0	-2.0	-1.8	-2.1	-3.9	-3.3	-2.2	-4.1	-16.7
BCOM Energy	-1.0	-7.7	-32.5	-12.6	1.6	-5.1	-11.7	-11.0	-13.8	-51.8
BCOM Precious Metals	-1.0	-0.2	-1.1	-0.6	-0.4	-0.5	-0.9	-0.6	-1.1	-1.1
BCOM	-3.3	-5.9	-11.4	-6.3	0.0	-0.9	-4.7	-6.6	-9.5	-21.8
BCOM Softs	-3.3	-4.2	-5.6	-7.4	-12.5	-4.9	0.9	9.0	0.5	-24.7
BCOM Agriculture	-7.8	-8.0	-6.1	-4.1	-1.0	4.9	1.9	-1.9	-9.6	-8.3
BCOM Grains	-11.4	-10.7	-7.0	-4.7	0.7	8.2	3.6	-5.8	-12.6	-2.5
Commodities Roll Yield										
Brent Crude	10.9	-4.9	-27.7	-23.3	0.3	6.9	4.2	8.3	-12.5	-55.6
Gas Oil	9.6	-0.9	-22.7	-11.0	-1.6	2.1	7.4	2.1	-12.3	-20.5
Lean Hogs	7.7	-8.2	-13.6	0.3	0.6	-1.7	-4.5	-9.6	-23.8	-30.8
Cotton	4.3	1.0	-1.1	-2.1	7.7	-3.6	5.2	15.5	14.3	-24.1
Heating Oil	3.5	-6.4	-25.3	-3.0	1.1	-1.3	1.0	-2.9	-11.7	-25.3
Zinc	2.8	-3.1	-2.7	-2.5	-4.6	-8.8	-3.1	-3.0	-5.3	-11.2
Crude Oil	2.4	-7.3	-38.2	-14.0	4.3	-0.3	-4.5	-9.7	-11.3	-70.3
Aluminum	1.4	-3.2	-2.9	-6.0	-9.1	-8.4	-6.2	-3.3	-6.0	-13.6
Unlead Gas	0.2	-4.0	-27.2	1.1	4.7	1.3	18.9	4.5	-6.9	-16.9
Platinum	0.2	-1.1	-0.4	-0.2	-0.5	-0.8	-1.2	0.9	-2.7	-6.2
Soybean Oil	-0.2	-2.9	-5.4	-3.2	-2.9	-1.3	-4.2	-4.2	-8.5	-6.9
Gold	-0.7	-0.3	-0.9	-0.4	-0.2	-0.4	-0.9	2.9	-1.0	-1.1
Silver	-0.8	0.1	-1.8	-1.2	-0.9	-0.7	-1.1	4.5	-5.1	-1.5
Soybean	-0.9	-3.0	0.2	-0.2	17.0	18.5	5.5	-1.8	0.5	16.1
Live Cattle	-1.1	4.4	7.8	2.0	0.6	-6.8	-12.8	-12.5	-12.2	-9.6
Copper (CME)	-1.1	-3.5	-1.6	-0.7	0.3	-1.7	-1.3	-0.1	-3.6	-7.1
Nickel	-1.6	-0.6	-1.7	0.5	-2.9	-2.3	-1.0	-1.7	-1.6	-7.3
Soybean Meal	-5.7	-4.8	-0.5	9.6	28.7	16.5	13.0	-1.3	20.7	30.2
Coffee	-5.9	-9.2	-9.7	-7.8	-12.6	-7.2	-5.0	-3.4	-8.5	-11.1
Sugar	-6.0	-3.2	-5.2	-9.9	-19.5	-4.1	3.1	18.7	4.6	-41.8
Corn	-10.8	-12.4	-7.9	-9.6	-7.4	9.4	10.8	0.4	-20.9	-11.8
Natural Gas	-13.6	-14.0	-52.6	-19.8	0.8	-22.3	-42.7	-13.8	-16.1	-47.6
Wheat	-15.9	-18.0	-10.9	-1.9	-7.0	-5.1	-9.4	-14.6	-23.8	-14.7
HRW Wheat	-17.2	-17.8	-14.7	-7.6	-2.5	-3.3	-4.1	-7.6	-9.9	-4.7

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

Name	7/2018	6/2018	5/2018	4/2018	3/2018	2/2018	1/2018	12/2017	11/2017	10/2017	9/2017
■ 1 Yr Spread ((Forward-Forecast)/ Forecast											
■ Energy											
WTI Crude Spread %	2.6	6.1	4.3	7.3	3.6	0.3	4.7	19.4	13.7	9.0	3.9
Brent Crude Spread %	5.2	7.1	8.9	9.8	4.6	0.3	7.7	23.8	17.8	15.2	7.2
ULS Diesel Spread %	0.2	8.4	9.6	6.1	2.6	0.8	7.6	32.8	18.4	20.8	16.1
Unleaded Gasoline Spread %	-0.3	-0.1	1.4	3.5	1.3	-0.2	8.3	15.1	7.7	12.1	2.7
■ Soft											
Sugar Spread %	-6.5	-2.3	0.7	-6.2	-6.9	-4.0	-4.5	-5.2	-4.4	-7.0	-12.4
Coffee Spread %	-6.4	-5.6	-2.5	-1.3	-4.0	-4.3	-6.0	-6.5	-5.9	-7.7	-5.4
Cotton Spread %	3.1	-0.2	9.9	2.5	5.1	10.2	6.7	7.7	2.1	-6.3	-5.9
■ Industrial Metals											
Copper Spread % (LME)	-5.8	-2.9	-1.3	-2.5	-3.5	3.3	7.0	17.8	10.5	13.3	8.0
Aluminum Spread %	-0.5	0.2	3.9	3.3	-3.9	2.7	7.5	14.7	3.9	10.9	8.5
Zinc Spread %	-9.4	-4.2	-0.4	-2.1	2.8	7.5	10.1	16.6	10.8	16.5	13.0
Nickel Spread %	1.3	8.4	10.8	5.1	10.3	14.5	13.4	23.2	7.3	20.3	3.3
■ Precious Metals											
Gold Spread %	-2.7	-2.2	0.3	1.1	1.5	1.8	5.4	4.1	1.2	1.3	2.1
Silver Spread %	-2.5	-4.1	-2.3	-2.6	-3.2	-3.6	1.1	0.1	-4.4	-2.9	-3.4
■ Grain											
Corn Spread %	-4.8	-5.9	2.4	4.4	3.6	3.0	0.2	-3.3	-5.2	-4.8	-3.5
Soybeans Spread %	-7.9	-8.0	0.6	2.6	4.4	4.3	2.8	-2.7	1.0	0.2	0.1
Wheat Spread %	6.3	0.0	10.3	8.6	2.7	9.1	4.0	-3.0	-6.6	-5.4	1.3

## **Data Set**

Data Oct												
Name	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
■ Data Set												
■ 1 Yr Spread												
■ Energy												
Natural Gas Forward	2.90	2.95	3.72	2.34	2.89	4.23	3.35	2.99	4.34	5.57	5.62	7.48
WTI Crude Forward	67.6	60.4	53.7	37.0	53.3	98.4	91.8	98.8	91.4	79.4	44.6	96.0
WTI Crude Forecast	65.9	50.6	43.2	50.0	93.6	98.2	95.0	94.0	79.0	61.4	101.5	69.6
Brent Crude Forward	74.3	66.9	56.8	37.3	57.3	110.8	111.1	107.4	94.8	77.9	45.6	93.9
Brent Crude Forecast	70.6	54.0	44.9	54.0	100.0	108.0	111.9	110.7	80.0	62.0	99.1	71.0
ULS Diesel Forward	2.14	2.08	1.70	1.10	1.85	3.08	3.05	2.94	2.54	2.12	1.41	2.64
ULS Diesel Forecast	2.14	1.56	1.34	1.69	2.79	2.98	3.05	2.87	2.13		2.96	
Unleaded Gasoline Forward	2.01	1.80	1.67	1.27	1.44	2.79	2.81	2.69	2.45	2.05	1.01	2.48
Unleaded Gasoline Forecast	2.04	1.56	1.39	1.64	2.65	2.86	2.95	2.91	2.12	1.47	2,49	
■ Soft												
Sugar Forward	0.12	0.15	0.20	0.15	0.15	0.16	0.20	0.23	0.32	0.27	0.12	0.11
Sugar Forecast	0.13	0.16	0.18	0.13	0.17	0.18	0.22	0.27	0.21	0.17	0.13	0.10
Coffee Forward	1.13	1.26	1.37	1.27	1.67	1.11	1.44	2.27	2.40	1.36	1.12	1.36
Coffee Forecast	1.21	1.35	1.37	1.34	1.79	1.26	1.78	2.53	1.60	1.23	1.36	
Cotton Forward	0.88	0.79	0.71	0.63	0.60	0.85	0.75	0.92	1.45	0.76	0.49	0.68
Cotton Forecast	0.85	0.73	0.65	0.64	0.76	0.84	0.79	1.34	0.90	0.60	0.67	0.67
■ Industrial Metals												
Copper Forward (LME)	6,591	7,219	5,526	4,713	6,349	7,373	7,913	7,595	9,644	7,352	3,049	6,651
Copper Forecast (LME)	6,975	6,129	4,826	5,575	6,871	7,334	7,958	8,855	7,460	5,100	6,973	6,750
Aluminum Forward	2,163	2,258	1,694	1,506	1,834	1,762	2,047	1,997	2,459	2,204	1,514	2,366
Aluminum Forecast	2,180	1,968	1,600	1,693	1,883	1,883	2,038	2,450	2,167	1,675	2,607	2,550
Zinc Forward	2,907	3,335	2,564	1,600	2,168	2,045	2,055	1,831	2,447	2,535	1,187	2,356
Zinc Forecast	3,175	2,861	2,043	1,961	2,170	1,930	1,963	2,210	2,192	1,641	1,905	2,775
Nickel Forward	13,919	12,714	9,975	8,788	15,088	13,843	17,008	18,731	24,715	18,467	11,629	26,060
Nickel Forecast	13,736	10,322	9,594	12,170	17,000	15,124	17,602	22,997	21,814	14,672	21,229	28,263
■ Precious Metals												
Gold Forward	1,269	1,309	1,152	1,060	1,184	1,202	1,676	1,567	1,421	1,096	884	838
Gold Forecast	1,304	1,258	1,262	1,165	1,265	1,420	1,677	1,575	1,211	960	872	747
Silver Forward	16.02	17.15	15.99	13.80	15.57	19.34	30.17	27.88	30.91	16.82	11.27	14.80
Silver Forecast	16.43	17.13	17.11	15.84	19.10	24.00	31.40	35.50	19.68	14.66	15.00	13.46
Platinum Forecast	925	951	1,000	1,076	1,390	1,514	1,556	1,752	1,616	1,184	1,575	1,350
Palladium Forecast	989.8	855.0	616.6	700.0	803.0	734.0	643.0	733.0	520.0	255.0	350.5	330.0
<b>■</b> Grain												
Corn Forward	3.7	3.5	3.5	3.6	4.0	4.2	7.0	6.5	6.3	4.1	4.1	4.6
Corn Forecast	3.9	3.6	3.6	3.8	4.1	5.9	7.0	6.9	4.9	3.8	5.4	3.6
Soybeans Forward	9.4	9.5	10.0	8.7	10.2	13.1	14.2	12.0	13.9	10.4	9.7	12.0
Soybeans Forecast	10.0	9.8	9.9	9.5	12.4	14.0	14.7	13.5	10.5	10.4	12.4	9.9
Wheat Forward	5.2	4.3	4.1	4.7	5.9	6.1	7.8	6.5	7.9	5.4	6.1	8.9
Wheat Forecast	4.9	4.4	4.4	5.1	5.8	6.9	7.5	7.4	6.2	5.4	8.4	6.2

# **Market Flows – Open Interest Key Metrics**

Name	Current	MTD % Change					2 Year High
■ Open Interest (Aggregate - 1,000s)							
■ Single Commodities							
Coffee	328	19.3	28.1	50.5	50.5	73.5	328
Soybean Meal	511	2.0	-0.4	35.9	49.0	40.8	530
Soybean	820	2.5	-3.9	16.3	32.3	19.0	976
Corn	1,848	0.4	8 <b>.</b> 5	20.0	31.5	40.2	2,007
Sugar	1,007	7.2	1.1	33.7	31.3	20.2	1,037
Soybean Oil	518	6.2	4.0	16.7	27.0	43.9	542
Cotton	265	3.1	-1.1	-5.0	22.7	13.3	322
Unlead Gas	461	6.0	0.7	19.1	17.3	17.0	501
Natural Gas	1,516	2.6	5.4	4.7	15.1	52.2	2,971
Platinum	82	-5.8	3.8	-1.2	13.9	3.8	94
Wheat	485	<b>4.</b> 3	7.1	-7 <b>.</b> 3	13.3	8.0	581
Nickel	166	-4.1	0.0	10.7	11.4	1.2	188
Gas Oil	1,010	-7.4	-4 <b>.</b> 5	16.8	9.9	30.5	1,108
Silver	221	5.2	16.3	13.9	6.8	-0.9	243
Crude Oil	2,358	-4.9	-10.6	-4.2	6.7	33.7	2,714
HRW Wheat	279	14.8	11.2	-15.5	3.3	16.3	342
Gold	450	-4 <b>.</b> 3	-9 <b>.</b> 3	-4.7	2.3	-20.9	600
Brent Crude	2,321	-4.5	-9.4	0.0	1.1	7.1	2,704
Heating Oil	394	4.8	-9.6	-12.3	-0.8	2.6	491
Aluminum	453	-6.2	-10.8	-12.9	-3.4	-18.5	567
Copper (CME)	301	12.7	24.9	7.5	-3.5	63.6	338
Zinc	179	2.9	-5.3	-10.5	-10.1	-9.6	225
Lean Hogs	239	4.4	-5 <b>.</b> 9	0.0	-11.2	6.7	282
Live Cattle	308	-5.2	-12.0	-7 <b>.</b> 5	-14.9	22.2	432
Copper (LME)	160	- <b>4.</b> 8	-10.1	-21.2	-23.8	-10.6	234
Palladium	22	0.0	-8.3	-40.5	-35.3	-21.4	40

Name	2018↓	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ Open Interest (Aggregate - 1,0										
■ BCOM	15,415	14,623	12,965	11,965	10,881	11,033	10,367	9,282	10,206	8,524
■ Sector										
■ Energy	8,042	7,931	7,084	6,057	5,033	5,346	4,980	4,230	4,262	3,712
■ Agriculture	6,062	5,168	4,493	4,563	4,211	4,090	3,876	3,418	4,399	3,447
■ Industrial Metals	1,258	1,354	1,319	1,178	1,224	1,104	1,006	1,159	1,105	1,016
■ Precious Metals	774	786	667	673	620	613	658	585	783	669
■ Livestock	547	572	501	431	481	591	578	552	534	443
■ Single Commodities										
Crude Oil	2,343	2,460	2,051	1,671	1,468	1,616	1,473	1,328	1,430	1,193
Brent Crude	2,321	2,322	2,159	2,031	1,513	1,443	1,285	886	873	728
Corn	1,848	1,540	1,236	1,334	1,237	1,203	1,128	1,151	1,549	1,002
Natural Gas	1,516	1,448	1,243	957	939	1,291	1,165	1,011	772	708
Sugar	1,007	753	805	879	836	830	754	559	613	834
Gas Oil	1,006	865	802	700	435	477	512	458	619	545
Soybean	820	705	632	646	599	576	546	460	629	418
Soybean Oil	518	444	372	384	355	340	306	273	358	211
Soybean Meal	513	376	329	402	341	262	212	194	192	162
Wheat	485	523	448	368	371	411	456	384	492	362
Unlead Gas	461	387	400	355	332	239	282	277	267	235
Aluminum	453	520	541	551	595	539	495	682	546	487
Gold	450	472	416	415	372	380	428	419	585	490
Heating Oil	394	449	429	342	346	279	263	269	301	304
Coffee	328	218	191	172	160	142	144	105	140	126
Live Cattle	308	333	306	265	266	327	329	317	327	265
Copper (CME)	301	280	224	166	160	167	147	121	167	155
HRW Wheat	279	330	239	193	132	154	158	139	219	145
Cotton	265	279	242	185	178	172	171	152	207	187
Lean Hogs	239	239	194	166	215	264	248	235	207	178
Silver	221	194	164	168	151	132	141	106	136	124
Zinc	179	200	184	167	182	184	166	148	135	149
Nickel	166	150	160	148	132	81	69	65	61	62
Copper (LME)	160	203	209	146	155	132	130	143	196	163
Platinum	81	83	63	65	64	62	60	42	39	33
Palladium	22	37	24	24	33	39	29	18	23	23

Bloomberg Commodity Index (BCOM)

# **Market Flows – Commitment of Traders Key Metrics**

noy mounds							
Name	Currenŧ	-	_1 Mth		YTD Change		
		Change	Change	Change		Change	Change
■ Net - Managed Money Total/Disagg							
■ Single Commodities							
WTI Crude	392,147	-9,543	78,280	-40,971	-19,825	153,646	271,591
Brent Crude	367,640	14,395	-90,809	-244,846	-193,644	79,069	79,104
Aluminum (Pre- MiFID II)	163,475	6,307	-3,292	21,105	3,315	-10,481	115,362
Aluminum (Post- MiFID II)	128,184	-17,934	-64,619	6,044			
Gasoline	90,628	11,006	5,234	-20,769	11,178	61,998	95,706
Cotton	81,458	406	220	-1,413	-20,944	62,803	13,934
Zinc (Pre MiFID II)	79,906	-1,121	-6,682	3,640	-471	-8,898	44,606
Heating Oil	56,197	12,215	-9,139	-13,052	-25,627	57,232	43,455
Soybean Meal	49,940	-3,438	-33,634	-55,481	18,683	54,321	-6,496
Live Cattle	48,558	11,643	21,644	33,167	-34,152	-62,144	20,252
Nickel	42,230	-664	-1,792	12,113	13,772	5,041	22,602
Zinc (Post MiFID II)	41,590	-3,037	-14,396	-26,316			
Copper (LME) (Pre MiFID II)	37,448	-917	-16,651	-27,111	-31,597	-34,385	25,052
Natural Gas	24,984	-20,278	-161,815	-133,162	77,430	-48,554	68,028
Wheat	23,942	20,385	24,694	78,655	169,677	-3,908	154,126
HRW Wheat	22,058	4,130	-25,155	-18,640	56,480	-38,597	51,326
Copper (LME) (Post MiFID II)	18,705	8,634	-27,399	-30,942			
Palladium	1,797	-1,663	-7,392	-7,894	-24,018	-20,229	-13,484
Lean Hogs	-3,000	3,291	-1,197	-5,645	-56,957	-80,302	-48,620
Silver	-11,343	-3,474	-39,407	-16,040	-4,238	-20,231	-107,924
Copper (CME)	-26,350	-2,627	-77,651	-63,849	-125,870	-111,973	-55,678
Platinum	-27,075	2,032	-2,067	-24,827	-22,865	-19,407	-64,440
Gold	-27,156	-5,001	-50,670	-141,519	-137,075	-102,204	-284,086
Soybeans	-61,315	-2,916	-48,514	-231,409	7,776	-112,200	-183,004
Sugar	-79,939	3,903	-52,688	81,931	-6,883	19,781	-329,451
Coffee	-89,603	406	-23,447	-28,071	-31,757	-67,838	-124,015
Soybean Oil	-89,952	259	3,187	-37,226	-93,358	-152,580	-72,734
Corn	-130,197	-874	-116,159	-253,074	76,427	-237,012	-64,659

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Name	2018↓	2017	2016	2015	2014	2013	2012	2011	2010	2009
Net - Managed Money Total/Disagg										
■ BCOM	924,308.0	1.2M	1.8M	107,932.0	1.1M	835,105.0	791,313.0	637,042.0	1.6M	1.1M
■ Sector										
■ Energy	931,596.0	1.1M	1.0M	95,835.0	278,790.0	623,230.0	258,739.0	230,666.0	224,236.0	185,192.0
■ Industrial Metals	296,709	437,560	423,576	90,351	218,292	35,635	14,988	-4,018	39,105	15,752
■ Livestock	45,558	136,667	147,051	24,525	117,295	137,611	110,898	104,018	133,520	83,521
■ Precious Metals	-63,777	124,419	101,310	-239	153,310	70,026	171,032	134,710	232,650	252,599
■ Agriculture	-273,608	-449,709	225,844	-75,733	383,375	-1,048	281,653	188,257	962,170	594,114
■ Single Commodities										
WTI Crude	392,147	411,972	307,909	100,797	199,388	270,386	134,834	192,466	217,046	133,742
Brent Crude	367,640	561,284	454,585	163,672	115,571	136,611	125,397	81,537		
Aluminum (Pre- MiFID II)	163,475	160,160	145,790	71,738	118,175					
Aluminum (Post- MiFID II)	128,184									
Gasoline	90,628	79,450	50,091	28,391	44,226	54,637	64,383	61,288	67,205	50,763
Cotton	81,458	102,402	76,052	51,307	11,005	43,288	25,828	6,683	40,645	61,292
Zinc (Pre MiFID II)	79,906	80,377	81,039	20,140	49,726					
Heating Oil	56,197	81,824	33,541	-35,339	-27,087	26,602	23,945	19,644	36,104	27,912
Soybean Meal	49,940	31,257	19,537	-40,843	54,132	57,931	41,489	-15,232	40,129	35,586
Live Cattle	48,558	82,710	92,516	11,081	80,102	96,771	59,569	68,105	104,412	49,281
Nickel	42,230	28,458	57,232	15,372	29,631					
Zinc (Post MiFID II)	41,590									
Copper (LME) (Pre MiFID II)	37,448	69,045	67,384	9,065	25,215					
Natural Gas	24,984	-52,446	174,043	-161,686	-53,308	134,994	-89,820	-124,269	-96,119	-27,225
Wheat	23,942	-145,735	-108,927	-83,120	20,481	-71,468	-11,899	-29,252	36,542	-8,683
HRW Wheat	22,058	-34,422	9,085	-14,975	24,999	8,022	23,619	9,128	49,108	9,943
Copper (LME) (Post MiFID II)	18,705									
Palladium	1,797	25,815	12,742	8,690	19,970	15,660	16,769	5,212	13,034	11,626
Lean Hogs	-3,000	53,957	54,535	13,444	37,193	40,840	51,329	35,913	29,108	34,240
Silver	-11,343	-7,105	39,098	6,282	17,051	5,573	23,113	6,200	26,836	26,631
Copper (CME)	-26,350	99,520	72,131	-25,964	-4,455	35,635	14,988	-4,018	39,105	15,752
Platinum	-27,075	-4,210	8,223	9,052	17,898	14,689	29,228	11,379	22,793	16,782
Gold	-27,156	109,919	41,247	-24,263	98,391	34,104	101,922	111,919	169,987	197,560
Soybeans	-61,315	-69,091	107,075	-63,515	39,446	136,683	109,007	23,683	164,287	69,606
Sugar	-79,939	-73,056	138,442	165,810	-66,824	-25,626	19,000	43,792	141,534	167,357
Coffee	-89,603	-57,846	12,706	-15,181	25,385	-8,417	-23,076	2,905	36,182	23,630
Soybean Oil	-89,952	3,406	85,522	60,895	35,047	-46,649	-42,424	-2,103	56,961	29,956
Corn	-130,197	-206,624	-113,648	-136,111	239,704	-94,812	140,109	148,653	396,782	205,427

Market Flows – ETF Flows (annual)

Name	2018↓	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ ETFs (\$ Billion AUM)										
■ Total ETF Assets Under Management	139.04	141.73	120.35	86.92	101.22	110.91	195.29	171.16	166.48	113.35
Precious Metals	103.83	109.98	90.30	62.95	77.79	84.93	164.56	142.19	130.39	80.66
+ Gold	90.87	95.36	76.91	51.78	62.75	68.70	143.55	120.89	105.90	70.06
■ Gota ■ Silver	9.37	10.11	9.41	7.24	8.64	10.60	16.18	16.38	18.41	8.02
■ Platinum	2.05	2.39	2.26	2.22	3.32	3.46	2.48	2.49	2.83	1.41
■ Palladium	0.79	1.28	1.07	1.24	2.30	1.40	1.37	1.32	2.12	0.65
■ Precious Metals Basket	0.64	0.70	0.57	0.40	0.64	0.68	0.92	1.07	1.13	0.52
■ Other	0.11	0.15	0.08	0.06	0.13	0.10	0.06	0.02		
■ Broad Commodity	22.06	17.26	14.83	10.84	14.55	17.70	19.57	18.21	19.74	14.55
<b>■</b> Energy	9.60	11.07	12.20	10.72	5.40	4.61	6.72	5.79	9.65	12.15
■ Agriculture	2.14	1.78	1.82	1.75	2.37	2.61	3.11	3.90	5.23	4.76
■ Industrial Metals	1.38	1.63	1.17	0.64	1.09	1.02	1.27	0.99	1.38	1.16
■ Livestock	0.02	0.01	0.02	0.02	0.03	0.03	0.06	0.08	0.10	0.08
■ ETFs Fund Flows (\$ Billion)										
■ Total ETF Fund Flows (\$ Billion)	1.53	8.72	23.47	9.77	3.14	-40.74	19.52	1.76	16.15	37.80
■ Broad Commodity	4.14	1.05	2.38	-0.01	1.37	-0.41	0.45	-0.83	2.20	6.47
■ Precious Metals	1.88	8.60	22.61	-3.83	-2.45	-36.83	17.74	5.92	14.98	19.61
<b>■</b> Gold	2.13	8.79	21.91	-3.01	-3.87	-37.83	14.93	6.97	11.23	16.84
■ Silver	0.29	0.02	0.95	0.00	0.38	0.82	2.45	-0.86	2.01	1.89
■ Precious Metals Basket	-0.02	0.05	0.17	-0.16	-0.01	-0.01	-0.20	-0.07	0.35	0.28
■ Other  ■ Platinum	-0 <b>.</b> 08	-0 <b>.</b> 02	0.00	0 <b>.</b> 00 -0 <b>.</b> 25	0.01 0.33	0.05 0.17	0.05 0.31	0.02 0.26	0.85	0.47
■ Palladium	-0.08	-0.31	-0.41	-0.25	0.33	-0.03	0.31	-0.41	0.85	0.47
Agriculture	0.03	0.22	0.15	-0.19	-0.17	-0.03	-0.76	-0.41	-0.72	2.54
■ Livestock	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.02	-0.01	0.01	0.03
■ Industrial Metals	-0.13	0.05	0.30	-0.14	0.20	-0.15	0.27	-0.03	0.08	0.65
<b>■</b> Energy	-4.39	-1.20	-1.97	13.94	4.19	-3.29	1.85	-2.64	-0.40	8.50
Name	2018↓	2017	2016	2015	2014	2013	2012	2011	2010	2009
DELTA WEIGHTED:										
■ ETFs (\$ Billion AUM) (DW)										
	142.20	146.22	122.02	00.73	101.61	110.17	107.20	171 70	1/0 //	114.04
■ Total ETF Assets Under Management	142.29	146.22	123.03	88.63	101.61	110.16	197.39	171.70	168.44	114.84
■ Precious Metals	105.08	111.21	91.00	62.94	77.80	85.03	166.20	142.69	131.34	81.00
<b>■</b> Gold	96.16	101.00	82.54	55.90	67.72	74.56	153.96	129.87	117.13	75 <b>.</b> 55
<b>■</b> Silver	5.33	5.74	<b>4.</b> 50	3.10	3.67	4.83	7 <b>.</b> 40	7.90	8.10	2.86
<b>■</b> Platinum	2.04	2.39	2.24	2.21	3.28	3.39	2.42	2.44	2.85	1.42
<b>■</b> Palladium	0.79	1.28	1.07	1.24	2.30	1.40	1.37	1.32	2.12	0.65
■ Precious Metals Basket	0.67	0.73	0.61	0.43	0.70	0.75	0.99	1.14	1.15	0.52
■ Other	0.08	0.08	0.04	0.06	0.13	0.10	0.06	0.02		
■ Broad Commodity	22.34	17.50	14.85	10.87	14.55	17.70	19.57	18.21	19.75	14.56
<b>∓</b> Energy	11.22	13.93	14.07	12.28	5.71	3.72	7.20	5.84	10.63	13.25
■ Agriculture	2.23	1.91	1.90	1.85	2.46	2.69	3.17	3.97	5.28	4.81
Industrial Metals	1.41	1.66	1.19	0.68	1.06	0.99	1.20	0.90	1.35	1.15
Livestock										
	0.02	0.01	0.02	0.02	0.03	0.03	0.06	0.08	0.10	0.08
■ ETFs Fund Flows (\$ Billion) (DW)		44.40	40.57	40.07	0.00	44.00	D4 E4	4.60	44.04	20.05
■ Total ETF Fund Flows (\$ Billion)	-0.64	11.40	19.57	19.87	8.80	-41.92	21.56	1.62	16.34	38.85
■ Broad Commodity	4.19	1.22	2.37	-0.01	1.37	-0.41	0.45	-0.83	2.20	6.47
■ Precious Metals	2.43	8 <b>.</b> 75	22.83	-3.35	-1.85	-36.09	18.61	5.75	14.48	19.69
<b>∓</b> Livestock	0.00	-0.01	0.00	0.00	-0.01	-0.03	-0.02	-0.01	0.01	0.03
■ Agriculture	-0.03	0.30	0.15	-0.16	-0.17	0.03	-0.78	-0.56	-0.78	2.57
■ Industrial Metals	-0.12	0.03	0.28	-0.03	0.22	-0.09	0.28	-0.05	0.03	0.61
■ Energy	-7.10	1.10	-6.06	23.41	9.23	-5.33	3.02	-2.66	0.39	9.47

# **PERFORMANCE: Bloomberg Commodity Indices**

# **Composite Indices**

\* Click hyperlinks to open in Bloomberg

Index Name			2018								
Index Name	Ticker	Jul	Jun	Q2	Q1	YTD	1-Year	3-Year	5-Year	10-Year	20-Year
Bloomberg Commodity ER	BCOM	-2.31%	-3.64%	-0.07%	-0.79%	-3.14%	1.19%	-6.96%	-32.31%	-58.37%	-5.49%
Bloomberg Commodity TR	<b>BCOMTR</b>	-2.13%	-3.50%	0.40%	-0.40%	-2.14%	2.73%	-4.74%	-30.65%	-56.97%	37.07%
Bloomberg Commodity Spot	<b>BCOMSP</b>	-2.61%	-3.30%	0.95%	0.21%	-1.48%	6.01%	16.99%	-10.55%	-16.30%	283.84%
Bloomberg Roll Select	BCOMRST	-1.86%	-4.04%	0.10%	-0.11%	-1.86%	2.74%	1.29%	-24.02%	-45.19%	199.32%
1 Month Forward	BCOMF1T	-2.02%	-3.67%	0.21%	0.20%	-1.62%	3.68%	-1.27%	-26.25%	-49.34%	146.27%
2 Month Forward	BCOMF2T	-1.82%	-3.92%	0.16%	0.50%	-1.17%	3.89%	0.68%	-25.01%	-49.34%	186.59%
3 Month Forward	BCOMF3T	-1.70%	-3.82%	0.25%	0.73%	-0.73%	4.87%	2.36%	-23.07%	-45.73%	205.07%
4 Month Forward	BCOMF4T	-1.58%	-3.94%	0.02%	0.72%	-0.85%	4.53%	6.02%	-19.16%	-40.43%	
5 Month Forward	BCOMF5T	-1.36%	-3.86%	0.21%	0.87%	-0.29%	5.53%	6.97%	-18.88%	-39.54%	
6 Month Forward	BCOMF6T	-1.27%	-3.91%	-0.01%	0.98%	-0.32%	5.31%	7.71%	-18.08%	-38.03%	
Energy	<b>BCOMENTR</b>	-4.36%	2.70%	10.73%	1.76%	7.77%	23.25%	-15.85%	-54.22%	-87.24%	-24.89%
Petroleum	<b>BCOMPETR</b>	-4.50%	3.84%	12.98%	4.71%	12.98%	38.58%	2.21%	-50.47%	-75.87%	179.68%
Agriculture	<b>BCOMAGTR</b>	2.70%	-10.48%	-8.66%	3.15%	-3.25%	-11.70%	-15.50%	-35.71%	-45.14%	-37.90%
Grains	<b>BCOMGRTR</b>	6.46%	-11.74%	-9.74%	7.09%	2.90%	-9.26%	-21.34%	-41.23%	-54.15%	-43.27%
Industrial Metals	<b>BCOMINTR</b>	-4.69%	-4.76%	0.98%	-6.23%	-9.75%	5.44%	23.18%	-1.21%	-37.09%	150.92%
Precious Metals	<b>BCOMPRTR</b>	-2.69%	-3.29%	-4.45%	-0.53%	-7.52%	-5.12%	7.64%	-13.66%	13.75%	256.95%
Softs	<b>BCOMSOTR</b>	-5.72%	-7.39%	-1.86%	-10.10%	-16.83%	-19.07%	-10.36%	-39.12%	-40.24%	-61.63%
Livestock	<b>BCOMLITR</b>	-4.34%	2.74%	5.47%	-10.03%	-9.23%	-8.88%	-14.92%	-15.41%	-46.29%	-51.39%
Ex-Energy	<b>BCOMXETR</b>	-0.98%	-6.40%	-4.23%	-1.36%	-6.46%	-5.25%	-0.17%	-20.12%	-29.75%	36.37%
Ex-Petroleum	<b>BCOMXPET</b>	-1.32%	-5.79%	-3.33%	-1.94%	-6.46%	-6.10%	-7.92%	-27.16%	-53.74%	
Ex-Natural Gas	<b>BCOMXNGT</b>	-1.97%	-3.75%	0.06%	0.17%	-1.75%	4.20%	1.47%	-25.99%	-41.64%	
Ex-Agriculture	<b>BCOMXAGT</b>	-4.10%	-0.38%	4.55%	-1.92%	-1.67%	9.24%	-0.64%	-29.61%	-62.93%	
Ex-Grains	<b>BCOMXGRT</b>	-3.86%	-1.67%	2.69%	-1.88%	-3.14%	5.49%	-1.25%	-28.71%	-59.10%	
Ex-Industrial Metals	<b>BCOMXIMT</b>	-1.62%	-3.24%	0.28%	0.95%	-0.41%	1.78%	-10.12%	-35.98%	-62.00%	
Ex-Precious Metals	<b>BCOMXPMT</b>	-2.03%	-3.53%	1.28%	-0.38%	-1.16%	4.20%	-7.48%	-34.11%	-63.30%	
Ex-Softs	<b>BCOMXSOT</b>	-1.88%	-3.21%	0.57%	0.34%	-0.98%	4.44%	-4.80%	-30.48%	-59.07%	
Ex-Livestock	<b>BCOMXLIT</b>	-2.00%	-3.87%	0.09%	0.26%	-1.65%	3.54%	-4.19%	-31.60%	-58.09%	
Ex-Agriculture & Livestock	<b>BCOMXALT</b>	-4.08%	-0.66%	4.47%	-1.12%	-0.92%	11.11%	0.56%	-31.02%	-65.16%	
Bloomberg Dollar Spot	BBDXY	-0.56%	0.90%	4.94%	-2.92%	1.31%	1.84%	-2.80%	14.51%	27.21%	
S&P 500 Total Return	<u>SPXT</u>	3.72%	0.62%	3.43%	-0.76%	6.47%	16.24%	42.46%	85.26%	175.52%	266.92%
US Aggregate	LBUSTRUU	0.02%	-0.12%	-0.16%	-1.46%	-1.59%	-0.80%	4.55%	11.77%	44.24%	149.98%
US Treasury	<u>LUATTRUU</u>	-0.42%	0.02%	0.10%	-1.18%	-1.49%	-1.23%	1.81%	7.29%	32.91%	132.18%
US Corporate	<u>LUACTRUU</u>	0.83%	-0.58%	-0.98%	-2.32%	-2.47%	-0.73%	9.66%	18.84%	71.76%	189.86%
US High Yield	<u>LF98TRUU</u>	1.09%	0.40%	1.03%	-0.86%	1.25%	2.60%	19.50%	29.75%	125.15%	256.73%

# **Single Commodity Indices**

			2018								
Index Name	Ticker	Jul	Jun	Q2	Q1	YTD	1-Year	3-Year	5-Year	10-Year	20-Year
Natural Gas	<b>BCOMNGTR</b>	-3.93%	-0.65%	4.25%	-6.85%	-6.71%	-14.42%	-54.57%	-70.13%	-98.39%	-99.28%
WTI Crude	<b>BCOMCLTR</b>	-4.94%	8.85%	13.23%	8.83%	17.14%	39.28%	-6.89%	-59.05%	-85.08%	85.04%
<b>Brent Crude</b>	<b>BCOMCOT</b>	-5.69%	2.72%	16.73%	5.40%	16.03%	49.23%	9.68%	-49.49%	-67.30%	537.01%
ULS Diesel	<b>BCOMHOTR</b>	-3.39%	0.34%	10.52%	-0.32%	6.44%	31.36%	7.28%	-42.87%	-66.05%	244.04%
Unleaded Gasoline	<b>BCOMRBTR</b>	-2.25%	0.20%	7.70%	0.88%	6.21%	24.09%	-3.90%	-44.05%	-45.14%	445.30%
Corn	<b>BCOMCNTR</b>	3.73%	-10.78%	-11.00%	8.72%	0.37%	-11.48%	-26.87%	-52.99%	-64.81%	-80.16%
Soybeans	<b>BCOMSYTR</b>	4.61%	-15.31%	-18.01%	7.88%	-7.47%	-13.21%	-11.01%	-14.51%	2.64%	186.41%
Wheat	<b>BCOMWHTR</b>	10.67%	-7.52%	4.71%	3.22%	19.60%	-2.04%	-26.36%	-50.85%	-80.67%	-86.78%
Soybean Oil	<b>BCOMBOTR</b>	-1.31%	-6.56%	-9.26%	-4.38%	-14.38%	-19.40%	-14.98%	-43.59%	-68.64%	-44.03%
Soybean Meal	<b>BCOMSMT</b>	3.67%	-12.86%	-15.45%	20.70%	5.80%	1.58%	-2.77%	28.64%	137.29%	1134.49%
HRW Wheat	<b>BCOMKWT</b>	14.12%	-12.44%	-1.61%	6.44%	19.51%	-1.99%	-32.80%	-56.29%	-76.62%	-69.87%
Copper	<b>BCOMHGTR</b>	-4.37%	-3.66%	-2.68%	-8.55%	-14.89%	-3.72%	14.13%	-13.84%	-33.76%	290.27%
Alumnium	<b>BCOMALTR</b>	-2.46%	-6.72%	8.74%	-12.02%	-6.68%	9.57%	22.30%	-3.93%	-58.08%	-5.02%
Zinc	<b>BCOMZSTR</b>	-7.68%	-7.27%	-12.11%	-0.82%	-19.52%	-3.17%	36.07%	33.67%	0.25%	64.31%
Nickel	<b>BCOMNITR</b>	-5.92%	-2.10%	12.06%	4.19%	9.84%	36.50%	22.55%	-5.67%	-34.07%	461.19%
Gold	<b>BCOMGCTR</b>	-2.37%	-3.70%	-5.49%	0.95%	-6.85%	-4.09%	9.56%	-9.29%	24.82%	286.97%
Silver	<b>BCOMSITR</b>	-3.78%	-1.89%	-0.85%	-5.22%	-9.58%	-8.20%	1.48%	-25.63%	-21.95%	149.63%
Sugar	<b>BCOMSBTR</b>	-13.73%	-6.25%	-3.08%	-17.87%	-31.32%	-32.38%	-20.25%	-61.05%	-56.13%	-37.79%
Coffee	<b>BCOMKCTR</b>	-4.35%	-8.54%	-5.54%	-7.61%	-16.52%	-27.76%	-33.62%	-42.05%	-67.37%	-90.87%
Cotton	<b>BCOMCTTR</b>	6.94%	-7.91%	6.14%	2.59%	16.46%	33.22%	42.48%	15.07%	40.29%	-64.08%
Live Cattle	<b>BCOMLCTR</b>	0.17%	2.83%	6.88%	-10.41%	-4.08%	-4.90%	-11.70%	4.39%	-24.88%	5.59%
Lean Hogs	<b>BCOMLHTR</b>	-13.51%	2.52%	3.01%	-10.72%	-20.47%	-18.24%	-22.69%	-43.06%	-70.76%	-87.60%

# **PERFORMANCE: Bloomberg Commodity Roll Select Indices**

Composite Roll Select Indices \* Click hyperlinks to open in Bloomberg

Inday Name	Tieken		2018								
Index Name	Ticker	Jul	Jun	Q2	Q1	YTD	1-Year	3-Year	5-Year	10-Year	20-Year
BCOM Roll Select	<b>BCOMRST</b>	-1.86%	-4.04%	0.10%	-0.11%	-1.86%	2.74%	1.29%	-24.02%	-45.19%	199.32%
Roll Select Agriculture	<b>BCOMRAGT</b>	2.92%	-10.14%	-7.49%	3.13%	-1.80%	-9.97%	-11.46%	-32.33%	-37.30%	16.05%
Roll Select Ex-Ags & Livestock	<b>BBURXALT</b>	-3.75%	-1.36%	3.83%	-0.87%	-0.93%	10.72%	9.41%	-22.09%	-52.88%	
Roll Select Grains	<b>BCOMRGRT</b>	6.55%	-11.44%	-8.55%	7.18%	4.43%	-6.93%	-16.55%	-39.44%	-49.92%	11.38%
Roll Select Softs	<b>BCOMRSOT</b>	-5.02%	-7.29%	-1.68%	-10.47%	-16.39%	-20.06%	-10.16%	-34.26%	-25.35%	-29.76%
Roll Select Livestock	<b>BCOMRLIT</b>	-5.01%	0.13%	1.49%	-8.87%	-12.15%	-13.05%	-25.58%	-19.74%	-37.57%	50.88%
Roll Select Energy	<b>BCOMRENT</b>	-3.80%	1.30%	9.88%	2.13%	7.95%	22.51%	1.23%	-40.48%	-76.21%	223.28%
Roll Select Ex-Energy	<b>BCOMRXET</b>	-0.88%	-6.53%	-4.21%	-1.08%	-6.08%	-4.90%	1.10%	-18.14%	-22.66%	135.48%
Roll Select Petroleum	<b>BCOMRPET</b>	-4.06%	2.53%	12.78%	5.05%	13.67%	37.08%	18.67%	-38.41%	-58.04%	703.86%
Roll Select Industrial Metals	<b>BCOMRINT</b>	-4.54%	-4.75%	0.33%	-5.85%	-9.83%	5.31%	24.24%	0.74%	-31.66%	279.25%
Roll Select Precious Metals	<b>BCOMRPRT</b>	-2.73%	-3.29%	-4.46%	-0.49%	-7.52%	-5.07%	8.01%	-13.25%	14.38%	272.75%

# **Single Commodity Roll Select Indices**

			2018								
Index Name	Ticker	Jul	Jun	Q2	Q1	YTD	1-Year	3-Year	5-Year	10-Year	20-Year
Natural Gas RS	<b>BCOMRNGT</b>	-3.06%	-2.08%	2.08%	-6.07%	-7.05%	-12.98%	-38.63%	-54.58%	-95.42%	-85.51%
WTI Crude RS	BCOMRCLT	-4.36%	4.57%	11.09%	7.66%	14.39%	34.53%	18.69%	-42.90%	-64.12%	704.95%
Brent Crude RS	<b>BCOMRCOT</b>	-4.83%	2.81%	16.99%	5.26%	17.19%	48.73%	19.27%	-37.71%	-54.69%	876.37%
ULS Diesel RS	<b>BCOMRHOT</b>	-3.22%	0.14%	9.54%	0.69%	6.75%	28.59%	7.47%	-41.32%	-64.09%	481.48%
Unleaded Gasoline RS	<b>BCOMRRBT</b>	-2.49%	0.41%	10.62%	4.07%	12.27%	27.67%	25.01%	-27.60%	-32.25%	811.96%
Corn RS	<b>BCOMRCNT</b>	3.78%	-10.13%	-9.51%	7.86%	1.30%	-9.62%	-23.13%	-51.61%	-60.77%	-62.12%
Soybeans RS	<b>BCOMRSYT</b>	4.69%	-14.57%	-15.41%	9.22%	-3.28%	-7.94%	0.38%	-5.89%	12.66%	322.70%
Wheat RS	<b>BCOMRWHT</b>	11.11%	-8.44%	3.19%	2.84%	17.91%	-3.07%	-27.52%	-53.54%	-77.79%	-53.22%
Soybean Oil RS	<b>BCOMRBOT</b>	-1.31%	-6.56%	-9.40%	-4.42%	-14.53%	-19.38%	-13.88%	-41.24%	-64.37%	-16.72%
Soybean Meal RS	<b>BCOMRSMT</b>	3.81%	-11.52%	-11.72%	20.61%	10.53%	7.78%	4.53%	33.41%	164.93%	1522.96%
HRW Wheat RS	<b>BCOMRKWT</b>	13.73%	-12.35%	-1.72%	6.10%	18.58%	-2.05%	-29.89%	-54.46%	-74.02%	-25.57%
Copper RS	<b>BCOMRHGT</b>	-4.37%	-3.79%	-2.74%	-7.93%	-14.38%	-3.03%	15.57%	-12.99%	-29.63%	470.41%
Alumnium RS	<b>BCOMRALT</b>	-2.10%	-6.47%	5.68%	-11.79%	-8.74%	7.43%	21.38%	-1.31%	-53.96%	42.15%
Zinc RS	<b>BCOMRZST</b>	-7.73%	-7.53%	-11.66%	-0.14%	-18.60%	-2.86%	38.95%	36.78%	12.60%	161.61%
Nickel RS	<b>BCOMRNIT</b>	-5.60%	-2.01%	12.11%	3.99%	10.06%	36.64%	23.91%	-3.41%	-28.41%	807.99%
Gold RS	<b>BCOMRGCT</b>	-2.38%	-3.70%	-5.49%	0.99%	-6.83%	-4.03%	10.07%	-8.92%	24.90%	293.59%
Silver RS	<b>BCOMRSIT</b>	-3.86%	-1.93%	-0.92%	-5.20%	-9.69%	-8.23%	1.61%	-24.99%	-20.26%	182.21%
Sugar RS	BCOMRSBT	-11.86%	-5.77%	-4.42%	-18.16%	-31.06%	-35.22%	-21.78%	-55.87%	-40.96%	37.30%
Coffee RS	<b>BCOMRKCT</b>	-4.44%	-8.51%	-5.51%	-7.88%	-16.82%	-27.99%	-33.49%	-40.40%	-62.49%	-85.01%
Cotton RS	<b>BCOMRCTT</b>	6.94%	-8.28%	9.99%	1.97%	19.95%	38.17%	48.11%	22.99%	67.79%	-39.72%
Live Cattle RS	BCOMRLCT	-0.71%	2.83%	6.88%	-9.39%	-3.85%	-5.95%	-13.04%	-0.97%	-16.34%	94.52%
Lean Hogs RS	<u>BCOMRLHT</u>	-14.99%	-5.39%	-8.83%	-7.62%	-28.40%	-27.96%	-45.32%	-47.43%	-65.24%	-26.27%

BCOM Constituent Weights

BCOM Index MEMB <GO> \* Click hyperlinks to open in Bloomberg

Group	Commodity	Ticker	Jul 2018 Contrib to Return %	Jul 31 2018 Weight %	Jun 29 2018 Weight %	Jul 2018 Weight% Change	2018 Target Weight
	Natural Gas	<u>NG</u>	-0.34	8.22	8.35	₩ (0.13)	8.01%
	WTI Crude	<u>CL</u>	-0.44	8.29	8.51	<b>(</b> 0.22)	7.32%
Francis.	Brent Crude	CO	-0.53	8.55	8.87	<b>(</b> 0.32)	7.68%
Energy	ULS Diesel	<u>HO</u>	-0.14	3.88	3.92	<b>(</b> 0.04)	3.67%
	Gasoline	XB	-0.11	4.37	4.36	0.01	3.75%
	Subtotal		-1.56	33.32	34.01	<b>4</b> (0.69)	30.43%
	Corn	<u>C</u>	0.23	6.58	6.19	0.39	6.13%
	Soybeans	<u>S</u>	0.25	5.71	5.33	10.39	5.96%
	Wheat	W	0.41	4.24	3.74	0.50	3.26%
Grains	Soybean Oil	BO	-0.04	2.41	2.39	0.03	2.75%
	Soybean Meal	<u>SM</u>	0.11	3.26	3.07	0.19	3.04%
	HRW Wheat	KW	0.21	1.68	1.44	0.24	1.30%
	Subtotal		1.17	23.88	22.14	1.74	22.44%
	Copper	HG	-0.30	6.35	6.48	<b>(</b> 0.13)	7.16%
Industrial	Aluminum	<u>LA</u>	-0.11	4.30	4.30	(0.00)	4.51%
	Zinc	LX	-0.20	2.46	2.60	(0.14)	3.10%
Metals	Nickel	LN	-0.20	3.12	3.24	<b>(</b> 0.12)	2.76%
	Subtotal		-0.81	16.23	16.62	<b>(0.38)</b>	17.53%
Precious	Gold	GC	-0.29	11.28	11.17	0.11	11.95%
	Silver	<u>SI</u>	-0.14	3.35	3.39	<b>(0.05)</b>	3.67%
Metals	Subtotal		-0.43	14.63	14.56	0.06	15.62%
	Sugar	SB	-0.40	2.50	2.83	<b>(</b> 0.33)	3.54%
Softs	Coffee	<u>KC</u>	-0.11	2.26	2.30	<b>(</b> 0.05)	2.61%
Softs	Cotton	CT	0.11	1.69	1.54	0.15	1.45%
	Subtotal		-0.40	6.45	6.67	<b>(0.22)</b>	7.60%
	Live Cattle	<u>LC</u>	0.01	4.00	3.80	0.20	4.31%
Livestock	Lean Hogs	<u>LH</u>	-0.27	1.49	2.19	<b>(</b> 0.70)	2.08%
	Subtotal		-0.27	5.49	5.99	<b>(0.50)</b>	6.39%
Total			-2.30	100.00	100.00		100.00%

#### **BLOOMBERG INTELLIGENCE: COMMODITY DASHBOARDS**

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Commitments of Traders Report	COT
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US exchange traded product fund flows	ETF

#### **Commodity Indices**

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Seasonality chart	<b>BCOMNG Index SEAG</b>
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LME warehouse inventories	<u>LMEI</u>

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Agriculture supply & demand	<b>AGSD</b>
Crop calendar	CCAL

# 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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