A Conundrum

- Mighty U.S. Energy, Dollar Not Necessarily Good for Commodities
- Crude Oil Price Resistance More Formidable Than Support in 2020
- Headwinds Remain Strong for Copper, Industrial Metals in 2020
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Bloomberg Commodity Index (BCOM)

Data and outlook as of December 31, 2019

Mike McGlone - BI Senior Commodity Strategist

BI COMD (the commodity dashboard)

Mighty U.S. Energy, Dollar Not Necessarily Good for Commodities

Performance: Dec. +5.0%, 2019 +7.7%, Spot +10.4%. (Returns are total return (TR) unless noted)

(Bloomberg Intelligence) -- Rapidly increasing U.S. energy exports and a strong dollar will limit broad commodity price gains in 2020, in our view. Commodities historically have needed a declining greenback for a sustained recovery, yet the record-setting stock market and dollar have been close companions, an unfavorable commodity conundrum. Following such an extended equity-market advance, some mean reversion is a primary risk to the more economicsensitive commodities -- crude oil and copper. A definitive U.S.-China trade deal would primarily support the grains, but less so if the strong dollar keeps corn, soybeans and wheat relatively expensive vs. non-U.S. exports.

Most scenarios favor gold continuing to advance. In the bigger picture, decarbonization and rapidly advancing technology shine on increasing industrial-metal prices.

Commodities Vs. the Dollar

Peak Dollar, Higher Copper Fuel 2020 Bull in Broad

Commodities. To get over the halfway hump of the 2010s bear market, broad commodities need a weaker dollar and stronger prices in copper and crude oil, if history is a guide. Our outlook for the 2020s favors the red metal vs. oversupplied crude. Gold and precious metals appear to be resuming bull markets, while green shoots of recovery are strengthening in agriculture.

Commodities Need Lower Dollar, Higher Copper. Broad commodity prices face greater headwinds at the onset of 2020 than in 2019, in our view. WTI crude oil is relatively high, at more than \$60 a barrel vs. about \$40 a year ago. If history is a guide, a peak greenback is necessary for commodities to advance. At about 0.90, copper was the commodity with the greatest annual correlation to the Bloomberg Commodity Index in the 2010s. Crude oil, the usual primary companion to the broad commodity market, was closer to 0.80.

Emphasizing the increasing significance of the dollar, key partners in copper's roughly 15% decline in the past 10 years were an increase of 30% in the trade-weighted broad dollar and a decline in the value of the Chilean peso. The peso is over .90 correlated to copper, and Chile is the world's largest producer and exporter. Learn more about Bloomberg Indices

Note - Click on graphics to get to the Bloomberg terminal

Commodity Recovery Prerequisite: Peak Greenback



MACRO PERFORMANCE

The Crude-Oil Rubber Band Is Stretched. Prominent on our macroeconomic performers' dashboard in 2019, crude oil is at elevated risk of mean reversion, in our view. When the history of 2020 is written, commodities and equities will not have had the benefit of starting the year at depressed levels, as they did a year ago. More organic demand-pull forces are required to offset the oversupplied energy market, which we view as unlikely as OPEC sustaining production cuts. The dollar will need to decline for enduring broad commodity-price appreciation.

Gold Set to Gain on Crude Oil in 2020

Security	8YTD	1	Chg Dec.	Chg QTD	1Yr 8	2Yr 8
		Ĭ		Pct	Chg	Chg
Generic 1st 'CL' Future	+34.8%		+10.9%	+13.1%	+34.7%	1.2%
S&P 500 Total Return Index	+31.5%		+3.0%	+9.1%	+31.5%	25.7%
S&P 500 Index	+28.7%		+2.7%	+8.4%	+28.78	20.7%
MSCI World ex USA Net Total Re	+22.4%		+3.1%	+7.8%	+22.4%	5.1%
MSCI Emerging Markets Net Tota	+18.8%		+7.8%	+12.28	+18.8%	1.5%
Gold	+18.3%		+3.7%	+3.1%	+18.3%	16.5%
Bloomberg Barclays U.S. Treasu	+15.8%		-2.3%	-3.7%	+15.8%	13.4%
Bloomberg Commodity Spot Index	+10.4%		+4.98	+5.6%	+10.4%	-1.3%
Bloomberg Commodity Index Tota	+7.7%		+5.0%	+4.48	+7.7%	-4.4%
Generic 1st 'HG' Future	+6.3%		+5.8%	+8.98	+6.3%	-14.8%
US Trade Wgt Broad Dollar Indx	+.5%		-1.5%	-2.2%	+.2%	7.3%
Bloomberg Dollar Spot	9%		-2.0%	-2.8%	98	2.2%

We view mean-reversion potential in the record-high U.S. stock market as a primary risk to broad commodity prices in 2020. Gold should continue to outperform copper, with related macroeconomic implications and the copper-to-gold ratio's strong companionship with bond yields.

SECTOR PERFORMANCE

All That Glitters Is Not Gold for Commodities. Gold and the precious metals leading commodity-sector performers in 2019 isn't a good sign for organic demand-pull forces driving broad commodities higher, in our view. The fact that the dollar and U.S. stock market are ending the 2010s near record highs tilts our bias toward acceleration of the more nascent gold-price advance in the 2020s. Primary support for precious metals is the low likelihood that rallying equity prices and the greenback will maintain velocity in the coming year and decade.

Gold, Precious Metals Appear as Nascent Bulls

Security	\$YTD	 Chg	Chg	1Yr %	2Yr %
		 Dec.	QTD Pct	Chg	Chg
Bloomberg Precious Metals Subi	+17.0%	 +3.9%	+3.7%	+17.0%	11.7%
Bloomberg All Metals Total Ret	+12.5%	+4.1%	+2.4%	+12.5%	-1.6%
Bloomberg Energy Subindex Tota	+11.8%	+6.9%	+5.8%	+11.8%	-2.4%
Bloomberg Industrial Metals Su	+7.0%	+3.1%	2%	+7.0%	-13.9%
BBG Softs TR	+4.3%	+6.2%	+13.9%	+4.3%	-18.9%
Bloomberg Agriculture Subindex	+1.7%	+5.8%	+7.1%	+1.7%	-9.3%
Bloomberg Grains Subindex Tota	-1.1%	+4.6%	+3.6%	-1.1%	-6.6%
Bloomberg Livestock Subindex T	-6.0%	+1.6%	+.1%	-6.0%	-7.6%

Industrial metals should be middle-of-the-road performers, notably when the dollar begins to decline. Highly subject to U.S. grain exports, agriculture is on the cusp of a bull market, also contingent on a peak greenback. The dollar should stop advancing when the U.S. stock market stops outperforming the world.

Energy

(Index weight: 29% of BCOM) Performance: Dec.+6.9%, 2020 +11.8%, Spot +11.6% *Note index weights are the 2018 average.

Energy 2020's Like 2010's

Crude Oil Price Resistance More Formidable Than

Support in 2020. Vulnerable is our watchword for crude oil prices at the onset of the new year. Ending 2019 near the top quartile of the five-year range vs. the bottom half at the conclusion of 2018 portends a shift to headwinds from tailwinds. We see little to reverse the predominant trend of the 2010s: rapidly increasing non-OPEC supply.

The Crude Oil 2010s Trend Appears Enduring. Crude oil will remain on the unfavorable side of the battle between oversupply and prices in 2020, but less so than the past decade in our view. A primary headwind for the new year -- ending 2019 a bit elevated vs. its recent range -- is the opposite of the tailwind at the end of 2018. Our graphic depicts the key driver of West Texas Intermediate prices in the past decade, declining U.S. liquid fuel net imports, expected to stabilize next year. A similar pause in plunging imports in 2015-16 coincided with the trough in prices.

What Will It Take to Rally Crude Oil in 2020s?



The primary question for the new decade is whether the price-adjustment process to global supply exceeding demand is near its nadir. Expecting an abrupt reversal in such an entrenched trend is less likely than staying the course or accelerating, which tilts our crude-oil price bias to the downside.

Higher-Plateau Risks Elevated for Crude Oil. A sustained pullback in the stock market would be a primary risk to crude-oil prices next year. For about the past five years, West Texas Intermediate has had a greater propensity to follow declining yields, but when equities correct, crude oil goes down a lot easier. In 2018 when the S&P 500 declined almost 20%, WTI simultaneously dropped over 40%. A less than 15% stock-market retreat during the 2015-16 transition coincided with an almost 50% decline in oil.

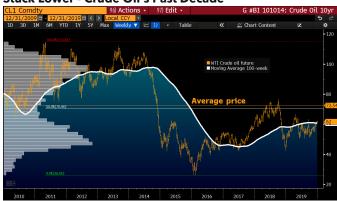
Bloomberg Commodity Index (BCOM)

Rising Stock Market Failing to Lift Crude Oil



Our graphic depicts the crude oil 200-day moving average tracking more closely with yields and the ease at which oil prices decline with minor blips in appreciating stock-market prices.

Crude-Oil Resistance Appears Formidable. Predominant trends in crude oil from the past decade are more likely to prevail in the next, keeping prices under pressure, in our view. West Texas Intermediate is more likely to consolidate at the lower end of its 10-year range than recover. Our graphic depicts crude facing a wall of resistance near its mean and median of about \$72 a barrel, which marked the peak of the recovery. The 100-week moving average is essentially flat, providing little directional bias except to show comfort at lower levels. Revisiting the 10-year mode just below \$50 appears more likely than sustaining above \$72, particularly if the stock market reverts a bit toward its mean.

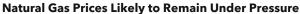


Stuck Lower - Crude Oil's Past Decade

Rapidly advancing technology, demographic shifts and decarbonization should keep the crude-oil demand vs. supply balance unfavorable for prices.

The Trend Not a Friend for Natural-Gas Prices. Natural gas is straightforward: Significant shifts are necessary to reverse the downtrend in prices, in our view. The greater likelihood is sustaining or accelerating the trends of the past decade. U.S. prices appear more likely to breach support of \$2 per million British thermal units (MMBtu) than sustain above \$3 resistance. Our graphic depicts the clear downtrend in the

100-week moving average and prices sustaining below the 10-year mean of about \$3.31.





Showing comfort above the 10-year most-traded price (the mode) of about \$2.80, which is also about the 100-week mean, would be an initial sign of potential recovery.

Short-Covering Spike Alert in Natural Gas. Natural gas should need some short cleansing before prices can decline further, if history is a guide. Our graphic depicts hedge fund positions in U.S. gas net-short about 19% of open interest -- the greatest since the record near 22% in 2015. The previous short extreme from mid-August coincided with an almost 20% price spike in the February future to the September high. Once cleansed of excessive shorts, prices resumed the decline. Nearing good support of about \$2 per million British thermal units (MMBtu), we see limited downside in natural gas until shorts are reduced.



No Fear of Big Freeze Here - Elevated Gas Shorts

Entering the peak of the heating season elevates volatility risks. Such emboldened shorts also indicate the extent of what is likely to be more enduring bearish sentiment.

PERFORMANCE DRIVERS

Crude in 2020 May Follow 2019 Natural Gas. Crude-oil and other petroleum prices are in a less-favorable position at the onset of 2020 than they were in 2019. The poor performance of natural gas since the 4Q18 spike is indicative of what to expect in a market dominated by U.S. oversupply, when prices visit the upper end of the range. Nearing the top quartile of the last five years of trading, crude appears vulnerable.

2020 Trading Places Risk: Crude Oil - Natural Gas

Security	8YTD		Chg Dec.	Chg QTD	1Yr 8	2Yr 8
		*		Pct	Chg	Chg
Bloomberg Unleaded Gasoline Su	+44.5%			+13.4%		3.6%
Bloomberg Brent Crude Subindex	+35.6%		+10.4%	+16.2%	+35.6%	15.48
Bloomberg WTI Crude Oil Subind	+34.4%			+13.9%		6.98
Bloomberg Petroleum Subindex T	+33.8%		+9.6%	+13.48	+33.8%	8.1%
Bloomberg Heating Oil Subindex	+24.6%		+8.0%	+9.2%	+24.6%	5.0%
BBG Energy Spot	+12.6%		+7.1%	+7.6%	+9.48	-5.7%
Bloomberg Energy Subindex Tota	+11.8%		+6.98	+5.8%	+11.8%	-2.48
Bloomberg Natural Gas Subindex	-37.2%		-3.0%	-17.2%	-37.2%	-37.3%

Ending 2018 near \$40 a barrel in WTI was a primary reason for the 2019 rally. The 2020 year will require more organic demand vs. supply forces to boost crude oil prices. Crude just above \$60 at the end of 2019 emphasizes the narrowing price cage in a market that has been essentially adjusting lower since the peak near \$145 in 2008. Mean-reversion potential in the U.S. stock market is a primary crude oil risk.

Front Energy Futures to December 31

Ticker	Last	\$YTD	\$MTD	Chg QTD	1 Yr	2 Yrs	%1YR	Change
				8	Ago	Ago		2 Year
								Percent
Generic 1st 'CL' Future	61.2	+34.7%	+10.9%	+13.1%	45.4	60.4	+34.7%	1.2%
Generic 1st 'XB' Future	s169.8	+28.3%	+6.3%	+5.8%	132.4	179.9	+28.3%	-5.6%
Generic 1st 'CO' Future	s66.0	+22.7%	+5.7%	+8.6%	53.8	66.9	+22.7%	-1.3%
Generic 1st 'HO' Future	s202.8	+20.7%	+8.0%	+6.4%	168.1	207.6	+20.7%	-2.3%
Generic 1st 'NG' Future	2.2	-25.9%	-4.5%	-6.5%	2.9	3.0	-25.7%	-26.0%

Metals

All (Index weight: 35% of BCOM) Performance: Dec.+4.1%, 2020 +12.5%

Industrial (Index weight: 19.0% of BCOM. Performance: Dec.+3.1%, 2020 +7.0%, Spot +5.4%

Precious (Index weight: 16.1% of BCOM. Performance: Dec.+3.9%, 2020 +17.0%, Spot +18.0%

Industrial Metals - Headwinds

Headwinds Remain Strong for Copper, Industrial Metals

in 2020. Base metal prices are more likely to decline in 2020 than sustain gains from 4Q19, in our view. Compared with a year ago, Dr. Copper's economic-outlook pendulum may have swung too far toward optimism vs. the pessimism seen at the onset of 2019. Sustaining the record-setting U.S. equities run appears to be a prerequisite for recovering base metals.

Industrial Metals Running Into Resistance. The primary risk for industrial metals in 2020 is some mean reversion in elevated stock-market prices, in our view. In 2019, base metals barely budged from 4Q18 levels since leading the global receding tide, despite sharp recoveries in equities. Our graphic depicts the mixed signals from top companions of the Bloomberg Industrial Metals Spot Subindex in the 2010s -- the MSCI Emerging Markets Index and Chilean peso. About 0.90 correlated the past 10 years, the 16% EM advance in 2019 to Dec. 30 appears to be pulling base metals along. Depressed global purchasing-manager indexes need sustained recoveries for similar in copper and industrial metals, if history is a guide.

U.S.-China Trade Baby Steps May Not Boost Copper



Metals typically perform poorly when the dollar is strengthening. The Chilean peso needs to recover to add some metals-price tailwinds.

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Copper \$3 Resistance Solid vs. \$2.50 Support. The majority of typically robust copper price companions are tilting toward lower prices. Our graphic depicts only the MSCI Emerging Markets Index pointing higher. Among the datasets with 10-year annual correlations greater than 0.70 to copper, China's manufacturing Purchasing Managers Index (PMI) leads at above 0.90. PMI is consistent with U.S. Treasury bond yields and the Chilean peso at the bottom of its past-decade range, implying similar for copper prices. On a 10-year autoscale basis, crude oil and copper appear in relative harmony.

Many Copper Price Companions Are Unfavorable



Expecting a sharp reversal in copper demand vs. supply and these price partners, potentially on the back of a definitive U.S.-China trade agreement, seems unlikely. The 2019 high of about \$3 a pound should be more formidable resistance than support near the \$2.50 low.

Copper Inventories Can Be Contrary Indicator. If global copper inventories are bottoming, prices may follow in 2021, if recent history is a guide. The most recent example of a similar potential low in stocks was at the beginning of 2015, when prices didn't reach a trough until 2H16. The situation was similar in the topping process. Copper prices peaked in July 2018 and the turn lower in global inventories followed about three months later. Our graphic depicts global copper stocks and prices measured by 200-day moving averages to emphasize a focus on the trends.

Copper Stocks Appear to Follow Prices



The annual copper-price correlation to our measure of global stocks is about 0.32 since 2005. The metal's relationship to the MSCI Emerging Markets Index and to China's manufacturing PMI is 0.90; minus 0.87 to the Chilean peso; 0.75 to U.S. bond yields; and 0.80 to crude oil.

PERFORMANCE DRIVERS

Gold's Upward Trajectory vs. Copper. Sustaining the 4Q jump in copper prices is less likely than what we expect to be a more enduring recovery in gold. Global economic demand-pull forces would have to abruptly reverse the moribund trend of the past few years to advance base metals in 2020. What's more probable is muddling along with some lessening of trade tensions. This year's rabbit -- nickel -- may have sufficiently corrected (almost 30% from the 2019 peak) to refresh the bull trend and should be a leading indicator in the new year for advancing industrial metals. The greater potential for nickel in 2020 is a range-bound market, in our view.

Industrial vs. Precious Nuances Favor Metals

Security	\$YTD	Chg Dec.	Chg QTD	1Yr 8	2Yr 8
			Pct	Chg	Chg
Bloomberg Nickel Subindex Tota	+32.6%	+2.68	-17.6%	+32.6%	10.8%
Bloomberg Gold Subindex Total	+18.0%	+3.6%		+18.0%	
Bloomberg Precious Metals Subi	+17.0%	+3.98	+3.78	+17.0%	11.78
Bloomberg Silver Subindex Tota	+13.9%	+4.98	+5.0%	+13.9%	2.3%
Bloomberg All Metals Total Ret	+11.8%	+3.5%	+2.48	+12.5%	-1.6%
Bloomberg Copper Subindex Tota	+7.3%	+5.2%	+8.5%	+7.3%	-15.5%
Bloomberg Industrial Metals Su	+7.0%	+3.18	28	+7.0%	-13.9%
US Trade Wgt Broad Dollar Indx	+.5%	-1.5%	-2.2%	+.28	7.3%
Bloomberg Zinc Subindex Total	-1.2%	18	-4.18	-1.2%	-22.3%
Bloomberg Aluminum Subindex To	-3.8%	+1.8%	+5.0%	-3.8%	-20.1%

As a broad sector, metals should continue outperforming most commodities, on the back of rapidly advancing technology, decarbonization and minimal storage costs.

Precious - Gaining Traction

Gold, Precious Metals Will Need a Good Reason to Stop

Advancing. Some combination of sustained dollar strength and lower stock-market volatility should be needed to hold back recovering gold prices, which elevates the metal's inverse sensitivity to equity prices, in our view. Since the first Federal Reserve interest-rate hike in December 2015, gold has been anticipating a favorable end-game.

Gold's Divergent Strength vs. Volatility, Dollar. A low chance of sustained dollar strength and minimal stockmarket volatility tilts our gold-price outlook favorably. Ending the past decade near the midpoint of its 10-year range sets the metal ahead of most commodities, which remain mired in bear markets. The possibility of a failed surge may be elevated in gold, as depicted in our graphic, but the underlying foundation for price appreciation is primarily from mean-reversion risks in the record high dollar and historically low CBOE S&P 500 Volatility Index (VIX). Dollardenominated gold following the euro-based metal to new highs should be a matter of time.



Recovering Gold vs. Strong Dollar, Weak Volatility

About \$1,400 an ounce, which held resistance for five years, is good initial support at the start of the 2020s. The 2013 peak of about \$1,700 is initial resistance.

Gold Bull Gaining Traction; Copper Reluctant. Gold is embarking on a new bull market, but copper has to show something other than an enduring downtrend, in our view. The dollar-denominated precious metal is ending 2019 at the best level in six years and has made new highs in other currencies, notably the euro. Our graphic depicts copper mired below the 2017-18 peak. Gold pulling copper higher isn't a good macroeconomic indication. The record high trade-weighted broad dollar is a primary metals headwind. A peak greenback is a prerequisite for a recovery in copper prices, if history is a guide.

Copper Advance Has Plenty of Resistance



Since 1999, the annual correlation of copper to the dollar is about minus 0.70, vs. gold's negative-0.65 relationship to the currency.

Gold Inverse Correlation vs. Equities Set to Gain. A

primary component for more gold-price gains in 2020 and the coming decade is higher stock-market volatility. Our graphic depicts the moribund status of the metal vs. the U.S. stock market, coincident with the CBOE S&P 500 Volatility Index (VIX) stuck in the lower quartile of its range. In the next year and decade, it's unlikely stock-market volatility can sustain such depressed levels, which favor appreciating gold.



Lower Equity Volatility Needed to Keep Gold Down

The unlikeliness of the record-high greenback to keep appreciating with similar velocity as it has since 2014 is an additional tailwind for gold prices. A primary companion of the advancing dollar -- the record setting U.S. stock market -completes the link that should make gold increasingly negatively correlated to equity prices.

Stocks Are Driving the Fed and Gold. There's a lot riding on the U.S. stock market extending its record run, but for gold the relationship will be increasingly inverse, in our view. In 2018, it was the first 20% correction in the S&P 500 since the financial crisis that helped break gold out of its narrow cage in 2019 above \$1,400 an ounce. The breach of this resistance, which held for about five years, came on the back

Bloomberg Commodity Index (BCOM)

of Fed easing. If history is a guide, lower equity prices are a primary catalyst for more Fed rate cuts, another tailwind for gold.





Downside risks for the metal may be less severe if the punch bowl is taken away, the old adage for rate hikes. The willingness of the Fed to cut rates with unemployment historically low may signal tolerance of inflation, a typical companion for advancing gold prices.

Coming Decade Set to Shine on Gold vs. Stocks. The goldto-S&P 500 relationship should be more inverse in the 2020s, similar the 2000s, in our view. Our graphic depicts the most stable, near-zero correlation since 1971, when President Richard Nixon unlinked the dollar and gold. A mirror opposite of the peak in the 10-year correlation just above 0.40 in 2012 is likely in the coming decade, if history is a guide. Gold typically performs best when the stock market peaks and is moribund for a period.



Gold Correlation to Equities Set For Negative

The quasi-currency began its historic 12-year run higher in 2001 as the internet bubble burst. In the 1970s and 1980s, gold's upward trajectory was similar vs. the weak stock market. On a 50-year annual basis, the metal is minus 0.25 correlated to the S&P 500 Index. Since 1999, the relationship has been closer to zero.

Agriculture

(Index weight: 30% of BCOM) Performance: Dec.+5.8%, 2020 +1.7%, Spot +8.8%

Grains (Index Weight: 24% of BCOM) Performance: Dec.+4.6%, 2020 -1.1%, Spot +5.7%

Softs (Weight: 6% of BCOM) Performance: Dec.+6.2%, 2020 +4.3%, Spot +14.0%

Green Shoots

Corn to Sugar: Agriculture Prices on Sound Footings for 2020s. Green shoots at the end of the 2010s support agriculture-price appreciation in the decade ahead, in our view. The period of sustained low prices is akin to the onset of the 2000s, when the ags advanced as the dollar depreciated. A peak greenback is a primary prerequisite to

Agriculture Set to Bottom When Dollar PeaksReturn to

boost U.S. grain exports and agriculture prices.

Top. An increase in U.S. grain exports will support agriculture prices, but a peak greenback is required for a sector bottom, if history is a guide. Ags are showing divergent strength vs. the dollar. Our graphic depicts the Bloomberg Agriculture Spot Index ending the decade at about the same level as in 2014, just as the dollar started its big bull run. In the 2010s, our gauge of the dollar value of U.S. grain exports is tops among correlation measures vs. the ag index at about 0.93, measured annually. The tradeweighted broad dollar leads negative correlations at about 0.60.



 Ags' Divergent Strength vs. the Greenback

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Dominated by U.S.-traded grain futures, agriculture prices peaked in 2011 as the dollar bottomed. At all-time highs, greenback mean-reversion risk vs. limited further upside is a price tailwind.

Bloomberg Commodity Outlook - January 2020 Edition Bloomberg Commodity Index (BCOM)

Corn Eyes Recovery From Sustained Low Prices. Meanreversion potential favors higher corn prices in the coming decade, in our view. At a steep discount to its 10-year median, the grain appears in the early days of following the old axiom that low prices are the cure for low prices. Our graphic depicts corn's 100-week moving average beginning to turn higher following prolonged consolidation at depressed levels. Ending the decade near the elevated apex of its bell curve of traded prices from the past 10 years -about \$3.70 a bushel -- the extreme distance to get to its halfway mark of about \$5.70 tilts our price bias upward.

Corn Price Mean Reversion Risks Point Higher



Typically such tightly coiled markets spring higher, particularly when they're at or below cost of production. The 10-year average price about \$4.65, which held resistance in 2019, is set to become support.

Wheat Set to Lead 2020s Grain Recovery. Wheat is the most likely among the grains to retrace its bear market from most of the past decade, in our view. Prices bottomed in 2016 and are on a clear recovery trajectory. Our graphic depicts the upward sloping 100-week average and the wheat price on the cusp of breaching resistance at its 10-year average of \$5.68 a bushel. Appearing similar to gold, until the metal's breakout higher this year, an extended consolidation period is solidifying a foundation for the wheat-price recovery. The most traded price area of the past decade, which is also about the 100-week mean at just below \$5 a bushel, is good support.

Wheat Price Recovery Is Gaining Legs



Soybean Recovery Likely Needs to Ripen More. Soybeans have more work to do -- notably vs. corn -- for a sustainable price recovery, in our view. If past performance and the 100-week moving average are guides, the oilseed's trend and path of least resistance remain down. Our graphic depicts the moribund soybean-price condition since the peak in 2012. The deep discount of the Dec. 13 price about \$9.20 a bushel, vs. the halfway mark to the 2019 low and 10-year average of \$11.22, nudge mean-reversion potential to the upside. Typically highly correlated, corn and wheat should provide guidance for beans.

Trend Is Down, Mean-Reversion Risks Elevated



PERFORMANCE DRIVERS

Grain Gains Set to Lead Agriculture in 2020. The biggest annual gain for grain prices since the 2012 peak is the start of a more enduring agriculture-sector recovery, in our view. For the second year, the Bloomberg Grains Spot Subindex is up about 5%. Led by soybean oil, with rallying palm oil and strong wheat, a thaw in U.S.-China trade tension is price supportive, but the underpinnings are broader. Grains' stocks-to-use measures appear to be peaking from multidecade highs, with sustained low prices becoming the cure, according to the old adage.

2019 Is Second Year For Recovering Grain Prices

Security	8YTD	1	Chg Dec.	Chg QTD	1Yr 8	2Yr 8
		*		Pct	Chg	Chg
Bloomberg Soybean Oil Subindex	+19.9%		+12.9%	+18.1%	+19.9%	-3.18
Bloomberg Coffee Subindex Tota	+12.2%		+9.18	+24.8%	+12.2%	-17.5%
Bloomberg Wheat Subindex Total	+9.4%		+3.3%	+12.2%	+9.48	13.2%
Bloomberg Grains Spot Subindex	+5.7%		+5.1%	+5.5%	+5.7%	10.6%
BBG Softs TR	+4.3%		+6.2%	+13.9%	+4.3%	-18.9%
Bloomberg Sugar Subindex Total	+1.9%		+3.9%	+6.5%	+1.98	-24.78
Bloomberg Agriculture Subindex	+1.7%		+5.8%	+7.18	+1.78	-9.38
Bloomberg Live Cattle Subindex	+1.2%		18	+9.3%	+1.2%	3.8%
Bloomberg Soybeans Subindex To	6%		+7.48	+2.6%	6%	-12.28
Bloomberg Grains Subindex Tota	-1.1%		+4.6%	+3.6%	-1.18	-6.68
Bloomberg Corn Subindex Total	-5.2%		+1.8%	-2.0%	-5.2%	-9.68
Bloomberg Livestock Subindex T	-6.0%		+1.6%	+.18	-6.0%	-7.6%
Bloomberg Cotton Subindex Tota	-6.5%		+5.8%	+10.9%	-6.5%	-13.3%
BBG Soybean Meal TR	-6.5%		+2.8%	48	-6.5%	-10.6%
Bloomberg Kansas Wheat Subinde	-9.6%		+8.98	+15.4%	-9.6%	-12.48
Bloomberg Lean Hogs Subindex T	-19.2%		+4.98	-14.9%	-19.2%	-28.1%

A key to reversing the ags' price decline is ending the retreat in the Brazilian real. Down about 4% vs. the dollar in 2019, primary related commodities -- soybeans, sugar and coffee -are showing divergent strength to that nation's currency.

DATA on BI COMD

Performance - Overview

Key Metrics

Name	112	1	3	YTD	1	2	3	5
		Mth %	Mth %	% Change	۲r %	۲r %	۲r %	¥r %
	(5 5	Change	Change		Change	Change	Change	Change
 Commodities 								
▼ BCOM Index TR	5	5.0	4.4	7.7	7.7	-4.4	-2.8	-18.1
Energy Index	6	6.9	5.8	11.8	11.8	-2.4	-6.6	-33.6
 All Metals Index 	CC 2	4.1	2.4	12.5	12.5	-1.6	18.8	10.6
Industrial Metals Index	3	3.1	-0.2	7.0	7.0	-13.9	11.4	-2.3
Precious Metals Index	CC3	3.9	3.7	17.0	17.0	11.7	23.9	20.1
 Ags & Livestock Index 	- 65	5.0	5.9	0.4	0.4	-9.1	-16.4	-29.3
Livestock Index	-01	1.6	0.1	-6.0	-6.0	-7.6	-1.7	-24.7
 Agriculture Index 	-05	5.8	7.1	1.7	1.7	-9.3	-19.3	-30.4
 Grains Index 	((4	4.6	3.6	-1.1	-1.1	-6.6	-17.1	-37.1
 Softs Index 	6	6.2	13.9	4.3	4.3	-18.9	-30.9	-29.6
BCOM EX Indices TR								
BCOM Index Roll Select TR	5	5.1	4.6	6.1	6.1	-6.3	-2.9	-14.8
BCOM Index Forwards TR								
BCOM Index ER	4	4.9	4.0	5.4	5.4	-8.3	-7.6	-22.5
BCOM Index Spot	4	4.9	5.6	10.4	10.4	-1.3	6.2	6.7
 Stocks 								
S&P 500 Index TR	C-2	2.9	9.0	31.3	31.3	25.6	53.0	73.7
 Bonds 								
Barclays U.S. Aggregate	0	0.0	0.3	8.8	8.8	8.8	12.7	16.3
 Currencies 								
Bloomberg U.S. Dollar Spot Index		-2.0	-2.8	-0.9	-0.9	2.2	-6.5	4.7
US Dollar Index		-1.8	-2.9	0.3	0.3	4.7	-5.6	6.9
US Trade Weighted Broad Dollar	- - -	-1.5	-2.0	0.5	0.2	7.3	0.0	15.8

Historical

Historical	Perfo	ormance m	ay vary fron	n above du	ie to delaye	ed end date	9			
Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Commodities										
 BCOM Index TR 	8.4%	-11.2%	1.7%	11.8%	-24.7%	-17.0%	-9.5%	-1.1%	-13.3%	16.8%
Energy Index	12.8%	-12.7%	-4.3%	16.3%	-38.9%	-39.3%	5.2%	-9.4%	-16.0%	-10.5%
 All Metals Index 	12.5%	-12.6%	20.8%	15.7%	-19.5%	-7.1%	-21.6%	2.9%	-11.5%	25.9%
Industrial Metals Index	8.5%	-19.5%	29.4%	19.9%	-26.9%	-6.9%	-13.6%	0.7%	-24.2%	16.2%
Precious Metals Index	16.9%	-4.6%	10.9%	9.5%	-11.5%	-6.7%	-30.8%	6.3%	4.6%	42.7%
 Ags & Livestock Index 	0.7%	-9.4%	-8.1%	0.9%	-16.1%	-6.0%	-12.6%	2.7%	-12.4%	33.9%
Livestock Index	-5.6%	-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%	-14.48	38.5%
 Grains Index 	-1.4%	-5.5%	-11.3%	-5.9%	-19.4%	-9.4%	-16.9%	18.3%	-14.4%	30.3%
 Softs Index 	5.5%	-22.3%	-14.8%	13.2%	-9.9%	-10.1%	-16.9%	-22.4%	-14.0%	59.9%
 BCOM EX Indices TR 										
 BCOM Index Roll Select TR 	6.7%	-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 	6.1%	-13.0%	0.7%	11.4%	-24.7%	-17.0%	-9.6%	-1.1%	-13.4%	16.7%
 BCOM Index Spot 	11.1%	-10.5%	7.6%	23.1%	-18.4%	-17.0%	-8.7%	3.7%	-8.1%	26.4%
Stocks										
 S&P 500 Index TR 	31.1%	-4.4%	21.8%	12.0%	1.4%	13.7%	32.4%	16.0%	2.1%	15.1%
Bonds										
 Barclays U.S. Aggregate 	8.8%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%
Currencies										
 Bloomberg U.S. Dollar Spot Index 	-0.6%	3.1%	-8.5%	2.8%	9.0%	11.0%	3.3%	-0.7%	1.8%	-1.8%
US Dollar Index	0.3%	4.4%	-9.9%	3.6%	9.3%	12.8%	0.3%	-0.5%	1.5%	1.5%
US Trade Weighted Broad Dollar	1.1%	7.2%	-6.0%	4.5%	10.7%	8.4%	2.8%	-1.4%	0.7%	-1.3%

Bloomberg Commodity Index (BCOM)

Performance - Commodity Total Returns

Key Metrics

Key wetrics										
Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
 Commodities 										
 BCOM Index TR 	8.4%	-11.2%	1.7%	11.8%	-24.7%	-17.0%	-9.5%	-1.1%	-13.3%	16.8%
Energy Index	12.8%	-12.7%	-4.3%	16.3%	-38.9%	-39.3%	5.2%	-9.4%	-16.0%	-10.5%
 All Metals Index 	12.5%	-12.6%	20.8%	15.7%	-19.5%	-7.1%	-21.6%	2.9%	-11.5%	25.9%
 Industrial Metals Index 	8.5%	-19.5%	29.4%	19.9%	-26.9%	-6.9%	-13.6%	0.7%	-24.2%	16.2%
 Precious Metals Index 	16.9%	-4.6%	10.9%	9.5%	-11.5%	-6.7%	-30.8%	6.3%	4.6%	42.7%
 Ags & Livestock Index 	0.7%	-9.4%	-8.1%	0.9%	-16.1%	-6.0%	-12.6%	2.7%	-12.4%	33.9%
 Livestock Index 	-5.6%	-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 	-1.4%	-5.5%	-11.3%	-5.9%	-19.4%	-9.4%	-16.9%	18.3%	-14.4%	30.3%
► Softs Index	5.5%	-22.3%	-14.8%	13.2%	-9.9%	-10.1%	-16.9%	-22.4%	-14.0%	59.9%
 BCOM EX Indices TR 	4 70		a (0				0.00	0.40		10.52
BCOM Index Roll Select TR	6.7%	-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	6.1%	-13.0%	0.7%	11.4%	-24.7%	-17.0%	-9.6%	-1.1%	-13.4%	16.7%
BCOM Index Spot	11.1%	-10.5%	7.6%	23.1%	-18.4%	-17.0%	-8.7%	3.7%	-8.1%	26.4%
Stocks										
 S&P 500 Index TR 	31.1%	-4.48	21.8%	12.0%	1.4%	13.7%	32.4%	16.0%	2.1%	15.1%
Bonds	0.00	0.00	0.00	0.40	0.50		0.00	4.00	7.00	4.00
Barclays U.S. Aggregate	8.8%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%
Currencies	0.70	3.48	0.00	2.08	0.00	11.00	0.00	0.70	1.00	1.00
Bloomberg U.S. Dollar Spot Index	-0.6%	3.1%	-8.5%	2.8%	9.0%	11.0%	3.3%	-0.7%	1.8%	-1.8%
US Dollar Index	0.3%	4.48	-9.9%	3.6%	9.3%	12.8%	0.3%	-0.5%	1.5%	1.5%
US Trade Weighted Broad Dollar	1.1%	7.2%	-6.0%	4.5%	10.7%	8.4%	2.8%	-1.4%	0.7%	-1.3%
Historical										
Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
 BCOM Total Return Indices 										
- Deorr rotat netarn inaleep										
Gasoline Index	47.3%	-28.3%	2.8%	6.4%	-12.6%	-43.8%	1.9%	25.7%	14.5%	13.1%
Gasoline Index Brent Crude Index	36.9%	-14.9%	14.2%	25.4%	-45.6%	-47.6%	7.2%	7.6%	16.8%	11.5%
Gasoline Index Brent Crude Index WTI Crude Index	36.9% 35.9%	-14.9% -20.5%	14.2% 5.1%	25.4% 7.1%	-45.6% -44.3%	-47.6% -41.7%	7.2% 6.8%	7.6% -11.8%	16.8% -3.6%	11.5% 3.8%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index	36.9% 35.9% 35.3%	-14.9% -20.5% -16.4%	14.2% 5.1% 25.6%	25.4% 7.1% 11.8%	-45.6% -44.3% -42.6%	-47.6% -41.7% 7.3%	7.2% 6.8% -20.1%	7.6% -11.8% -10.2%	16.8% -3.6% -24.7%	11.5% 3.8% 32.2%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index	36.9% 35.9% 35.3% 25.9%	-14.9% -20.5% -16.4% -15.7%	14.2% 5.1% 25.6% 15.0%	25.4% 7.1% 11.8% 33.5%	-45.6% -44.3% -42.6% -42.8%	-47.6% -41.7% 7.3% -38.8%	7.2% 6.8% -20.1% 0.4%	7.6% -11.8% -10.2% 5.5%	16.8% -3.6% -24.7% 10.7%	11.5% 3.8% 32.2% 8.3%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index	36.9% 35.9% 35.3% 25.9% 22.2%	-14.9% -20.5% -16.4% -15.7% -19.2%	14.2% 5.1% 25.6% 15.0% -7.0%	25.4% 7.1% 11.8% 33.5% 7.3%	-45.6% -44.3% -42.6% -42.8% -7.7%	-47.6% -41.7% 7.3% -38.8% -20.6%	7.2% 6.8% -20.1% 0.4% -22.4%	7.6% -11.8% -10.2% 5.5% -9.8%	16.8% -3.6% -24.7% 10.7% -15.2%	11.5% 3.8% 32.2% 8.3% 33.8%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index	36.9% 35.9% 35.3% 25.9% 22.2% 20.0%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8%	-45.6% -44.3% -42.6% -42.8% -7.7% -26.5%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index	36.9% 35.9% 35.3% 25.9% 22.2% 20.0% 17.7%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -2.8%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7%	-45.6% -44.3% -42.6% -42.8% -7.7% -26.5% -10.9%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -1.7%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8% -28.7%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -2.8% -10.2%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0%	-45.6% -44.3% -42.6% -42.8% -7.7% -26.5% -10.9% -12.7%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -1.7% -20.4%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8% -28.7% -36.6%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index Coffee Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4% 14.3%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -2.8% -10.2% -26.5%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8% -16.0%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0% -1.3%	-45.6% -44.3% -42.6% -42.8% -7.7% -26.5% -10.9% -12.7% -31.5%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -1.7% -20.4% 37.8%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8% -28.7% -36.6% -30.5%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1% -41.6%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1% -11.2%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8% 67.0%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index Coffee Index Wheat Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4% 14.3% 8.8%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -2.8% -10.2% -26.5% 3.5%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8% -16.0% -12.5%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0% -1.3% -24.1%	-45.6% -44.3% -42.6% -42.8% -7.7% -26.5% -10.9% -12.7% -31.5% -22.2%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -1.7% -20.4% 37.8% -9.4%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8% -28.7% -36.6% -30.5% -27.2%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1% -41.6% 9.8%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1% -11.2% -34.0%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8% 67.0% 21.2%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index Coffee Index Wheat Index Copper Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4% 14.3% 8.8% 8.7%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -2.8% -10.2% -26.5% 3.5% -21.2%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8% -16.0% -12.5% 29.2%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0% -1.3% -24.1% 15.7%	-45.6% -44.3% -42.6% -42.8% -7.7% -26.5% -10.9% -12.7% -31.5% -22.2% -25.1%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -12.3% -1.7% -20.4% 37.8% -9.4% -16.6%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8% -28.7% -36.6% -30.5% -27.2% -8.8%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1% -41.6% 9.8% 5.0%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1% -11.2% -34.0% -24.4%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8% 67.0% 21.2% 29.5%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index Coffee Index Wheat Index Copper Index Sugar Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4% 14.3% 8.8% 8.7% 2.8%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -2.8% -26.5% 3.5% -21.2% -26.1%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8% -16.0% -12.5% 29.2% -25.4%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0% -1.3% -24.1% 15.7% 22.8%	-45.6% -44.3% -42.6% -42.8% -7.7% -26.5% -10.9% -12.7% -31.5% -22.2% -25.1% -4.7%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -12.3% -1.7% -20.4% 37.8% -9.4% -16.6% -30.9%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8% -28.7% -36.6% -30.5% -27.2% -8.8% -20.0%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1% -41.6% 9.8% 5.0% -13.0%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1% -11.2% -34.0% -24.4% -11.9%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8% 67.0% 21.2% 29.5% 24.0%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index Coffee Index Wheat Index Copper Index Sugar Index Live Cattle Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4% 14.3% 8.8% 8.7% 2.8% 1.6%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -2.8% -10.2% -26.5% 3.5% -21.2% -26.1% 2.6%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8% -16.0% -12.5% 29.2% -25.4% 9.1%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0% -1.3% -24.1% 15.7% 22.8% -7.4%	-45.6% -44.3% -42.6% -42.8% -26.5% -10.9% -12.7% -31.5% -22.2% -25.1% -4.7% -14.3%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -1.7% -20.4% 37.8% -9.4% -16.6% -30.9% 22.1%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8% -28.7% -36.6% -30.5% -27.2% -8.8% -20.0% -5.0%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1% -41.6% 9.8% 5.0% -13.0% -3.9%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1% -11.2% -34.0% -24.4% -11.9% -11.9%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8% 67.0% 21.2% 29.5% 24.0% 15.0%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index Coffee Index Wheat Index Copper Index Sugar Index Live Cattle Index Zinc Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4% 14.3% 8.8% 8.8% 8.7% 2.8% 1.6% 0.3%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -2.8% -10.2% -26.5% 3.5% -21.2% -26.1% 2.6% -21.4%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8% -16.0% -12.5% 29.2% -25.4% 9.1% 29.7%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0% -1.3% -24.1% 15.7% 22.8% -7.4% 57.5%	-45.6% -44.3% -42.6% -42.8% -26.5% -10.9% -12.7% -31.5% -22.2% -25.1% -4.7% -14.3% -28.0%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -1.7% -20.4% 37.8% -9.4% -16.6% -30.9% 22.1% 3.5%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8% -28.7% -36.6% -30.5% -27.2% -8.8% -20.0% -5.0% -7.0%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1% -41.6% 9.8% 5.0% -13.0% -3.9% 9.0%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1% -11.2% -34.0% -24.4% -11.9% -10.% -27.8%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8% 67.0% 21.2% 29.5% 24.0% 15.0% -8.8%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index Coffee Index Wheat Index Copper Index Sugar Index Live Cattle Index Zinc Index Soybeans Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4% 14.3% 8.8% 8.7% 2.8% 1.6% 0.3% -0.9%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -2.8% -26.5% 3.5% -21.2% -26.1% 2.6% -21.4% -21.4% -11.7%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8% -16.0% -12.5% 29.2% -25.4% 9.1% 29.7% -8.1%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0% -1.3% -24.1% 15.7% 22.8% -7.4% 57.5% 14.8%	-45.6% -44.3% -42.6% -42.8% -26.5% -10.9% -12.7% -31.5% -22.2% -25.1% -4.7% -14.3% -28.0% -14.6%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -1.7% -20.4% 37.8% -9.4% -16.6% -30.9% 22.1% 3.5% -5.5%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8% -28.7% -36.6% -30.5% -27.2% -8.8% -20.0% -5.0% -7.0% 10.5%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1% -41.6% 9.8% 5.0% -13.0% 9.0% 24.0%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1% -11.2% -34.0% -24.4% -11.9% -10% -27.8% -16.4%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8% 67.0% 21.2% 29.5% 24.0% 15.0% -8.8% 34.9%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index Coffee Index Wheat Index Copper Index Sugar Index Live Cattle Index Zinc Index Soybeans Index Aluminum Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4% 14.3% 8.8% 8.7% 2.8% 1.6% 0.3% -0.9% -2.8%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -2.8% -20.5% 3.5% -21.2% -26.1% 2.6% -21.4% -11.7% -16.9%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8% -16.0% -12.5% 29.2% -25.4% 9.1% 29.7% -8.1% 31.2%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0% -1.3% -24.1% 15.7% 22.8% -7.4% 57.5% 14.8% 9.7%	-45.6% -44.3% -42.6% -42.8% -26.5% -10.9% -12.7% -31.5% -22.2% -25.1% -4.7% -14.3% -28.0% -14.6% -22.9%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -12.3% -12.3% -20.4% 37.8% -9.4% -16.6% -30.9% 22.1% 3.5% -5.5% -3.1%	7.2% 6.8% -20.1% 0.4% -11.8% -28.7% -36.6% -30.5% -27.2% -8.8% -20.0% -5.0% 10.5% -20.7%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1% -41.6% 9.8% 5.0% -13.0% -3.9% 9.0% 24.0% -4.0%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1% -11.2% -34.0% -24.4% -11.9% -1.0% -27.8% -16.4% -21.7%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8% 67.0% 21.2% 29.5% 24.0% 15.0% -8.8% 34.9% 5.4%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index Coffee Index Wheat Index Copper Index Sugar Index Live Cattle Index Zinc Index Soybeans Index Aluminum Index Corn Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4% 14.3% 8.8% 8.7% 2.8% 1.6% 0.3% -0.9% -2.8% -5.1%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -26.8% -21.2% -26.1% 2.6% -21.4% -11.7% -16.9% -4.6%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8% -16.0% -12.5% 29.2% -25.4% 9.1% 29.7% -8.1% 31.2% -12.1%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0% -1.3% -24.1% 15.7% 22.8% -7.4% 57.5% 14.8% 9.7% -9.8%	-45.6% -44.3% -42.6% -42.8% -7.7% -26.5% -10.9% -12.7% -31.5% -22.2% -25.1% -4.7% -14.3% -28.0% -14.6% -22.9% -19.2%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -12.3% -12.3% -20.4% 37.8% -9.4% -30.9% 22.1% 3.5% -3.5% -3.1% -13.3%	7.2% 6.8% -20.1% 0.4% -11.8% -22.4% -36.6% -30.5% -27.2% -8.8% -20.0% -5.0% -7.0% 10.5% -20.7% -30.3%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1% -41.6% 9.8% 5.0% -13.0% -3.9% 9.0% 24.0% 19.0%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1% -11.2% -34.0% -24.4% -11.9% -10.% -27.8% -16.4% -21.7% 1.1%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8% 67.0% 21.2% 29.5% 24.0% 15.0% -8.8% 34.9% 5.4% 30.7%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index Coffee Index Wheat Index Copper Index Sugar Index Live Cattle Index Zinc Index Soybeans Index Aluminum Index Corn Index Cotton Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4% 14.3% 8.8% 8.7% 2.8% 1.6% 0.3% -0.9% -2.8% -5.1% -5.8%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -26.5% 3.5% -21.2% -26.1% 2.6% -21.4% -11.7% -16.9% -4.6% -7.3%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8% -16.0% -12.5% 29.2% -25.4% 9.1% 29.7% -8.1% 31.2% -12.1% 12.5%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0% -1.3% -24.1% 15.7% 22.8% -7.4% 57.5% 14.8% 9.7% -9.8% 10.5%	-45.6% -44.3% -42.6% -42.8% -7.7% -26.5% -10.9% -12.7% -31.5% -22.2% -25.1% -4.7% -14.3% -28.0% -14.6% -22.9% -19.2% 3.0%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -12.3% -12.3% -20.4% 37.8% -9.4% -16.6% -30.9% 22.1% 3.5% -5.5% -3.1% -13.3% -21.2%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8% -28.7% -36.6% -30.5% -27.2% -8.8% -20.0% -5.0% -7.0% 10.5% -20.7% -30.3% 9.0%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1% -41.6% 9.8% 5.0% -13.0% -3.9% 9.0% 24.0% 19.0% -4.0% 19.0% -12.7%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1% -11.2% -34.0% -24.4% -11.9% -24.4% -11.9% -21.7% 1.1% -21.7%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8% 67.0% 21.2% 29.5% 24.0% 15.0% -8.8% 34.9% 5.4% 30.7% 98.2%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index Coffee Index Wheat Index Coffee Index Wheat Index Copper Index Sugar Index Live Cattle Index Zinc Index Soybeans Index Aluminum Index Corn Index Cotton Index Soybean Meal Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4% 14.3% 8.8% 8.7% 2.8% 1.6% 0.3% -0.9% -2.8% -5.1% -5.8% -7.3%	-14.9% -20.5% -16.4% -15.7% -19.2% -24.8% -26.5% -21.2% -26.5% -21.2% -26.1% -26.1% -26.% -11.7% -16.9% -4.6% -7.3% -4.4%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8% -16.0% -12.5% 29.2% -25.4% 9.1% 29.7% -8.1% 31.2% -12.1% 12.5% -4.8%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0% -1.3% -24.1% 15.7% 22.8% -7.4% 57.5% 14.8% 9.7% -9.8% 10.5% 18.1%	-45.6% -44.3% -42.6% -42.8% -7.7% -26.5% -10.9% -12.7% -31.5% -22.2% -25.1% -4.7% -14.3% -28.0% -14.6% -22.9% -19.2% 3.0% -18.0%	-47.6% -41.7% 7.3% -20.6% -12.3% -12.3% -12.3% -20.4% 37.8% -9.4% -16.6% -30.9% 22.1% 3.5% -5.5% -3.1% -13.3% -21.2% 11.8%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8% -28.7% -36.6% -30.5% -27.2% -8.8% -20.0% -5.0% -7.0% 10.5% -20.7% -30.3% 9.0% 20.0%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1% -41.6% 9.8% 5.0% -13.0% -3.9% 9.0% 24.0% 19.0% -4.0% 19.0% -12.7% 49.1%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1% -11.2% -34.0% -24.4% -11.9% -24.4% -11.9% -21.7% -16.4% -21.7% -21.7% -21.7% -21.7% -18.1%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8% 67.0% 21.2% 29.5% 24.0% 15.0% -8.8% 34.9% 5.4% 30.7% 98.2% 38.9%
Gasoline Index Brent Crude Index WTI Crude Index Nickel Index Heating Oil Index Soybean Oil Index Platinum Index Gold Index Silver Index Coffee Index Wheat Index Copper Index Sugar Index Live Cattle Index Zinc Index Soybeans Index Aluminum Index Corn Index Cotton Index	36.9% 35.9% 25.9% 22.2% 20.0% 17.7% 14.4% 14.3% 8.8% 8.7% 2.8% 1.6% 0.3% -0.9% -2.8% -5.1% -5.8%	-14.9% -20.5% -16.4% -15.7% -19.2% -14.8% -26.5% 3.5% -21.2% -26.1% 2.6% -21.4% -11.7% -16.9% -4.6% -7.3%	14.2% 5.1% 25.6% 15.0% -7.0% 3.0% 12.8% 5.8% -16.0% -12.5% 29.2% -25.4% 9.1% 29.7% -8.1% 31.2% -12.1% 12.5%	25.4% 7.1% 11.8% 33.5% 7.3% 0.8% 7.7% 14.0% -1.3% -24.1% 15.7% 22.8% -7.4% 57.5% 14.8% 9.7% -9.8% 10.5%	-45.6% -44.3% -42.6% -42.8% -7.7% -26.5% -10.9% -12.7% -31.5% -22.2% -25.1% -4.7% -14.3% -28.0% -14.6% -22.9% -19.2% 3.0%	-47.6% -41.7% 7.3% -38.8% -20.6% -12.3% -12.3% -12.3% -20.4% 37.8% -9.4% -16.6% -30.9% 22.1% 3.5% -5.5% -3.1% -13.3% -21.2%	7.2% 6.8% -20.1% 0.4% -22.4% -11.8% -28.7% -36.6% -30.5% -27.2% -8.8% -20.0% -5.0% -7.0% 10.5% -20.7% -30.3% 9.0%	7.6% -11.8% -10.2% 5.5% -9.8% 8.7% 6.1% 7.1% -41.6% 9.8% 5.0% -13.0% -3.9% 9.0% 24.0% 19.0% -4.0% 19.0% -12.7%	16.8% -3.6% -24.7% 10.7% -15.2% -21.8% 9.6% -10.1% -11.2% -34.0% -24.4% -11.9% -24.4% -11.9% -21.7% 1.1% -21.7%	11.5% 3.8% 32.2% 8.3% 33.8% 19.3% 28.7% 81.8% 67.0% 21.2% 29.5% 24.0% 15.0% -8.8% 34.9% 5.4% 30.7% 98.2%

Performance - Prices

Key	Metrics	
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Name	% Change o Day		MTD % Change	3 Mth % Change		1 Yr % Change	2 Yr % Change
 BCOM Single Commodity Price 							
Palladium	1.5			15.8		52.3	77.8
WTI Crude	-0.8			13.1		34.7	1.2
Nickel	-2.0			-18.8		31.5	9.9
Gasoline	-1.8			5.8		28.3	-5.6
Coffee	-1.9			28.2		27.3	2.8
Soybean Oil	-1.9			19.0		25.2	4.3
Brent Crude	-1.0			8.6		22.7	-1.3
Platinum	1.3			9.8		21.9	3.8
Heating Oil	-0.6	-1.0	8.0	6.4	20.7	20.7	-2.3
Gas Oil	-1.4			4.0		20.2	2.3
Gold	0.2			3.5		18.7	16.1
Lean Hogs	-0.5	1.2	15.2	9.1	17.1	17.1	-0.5
Silver	-0.4			5.5	15.5	15.5	4.5
Sugar	-0.8			12.6		11.6	-11.5
Wheat	0.5	0.4	2.1	12.7	11.0	11.0	30.9
Soybeans	0.4		7.6	4.1		6.9	-0.9
Copper (CME)	-1.2	-1.5	5.8	8.9	6.3	6.3	-14.8
Corn	-0.1			-0.1		3.4	10.5
Copper (LME)	-0.8			7.9		3.3	-14.7
Live Cattle	0.5	1.0	2.9	19.2	-0.1	-0.1	1.4
HRW Wheat	1.1	1.3	10.8	17.1	-0.6	-0.6	13.8
Aluminum	-1.0	-1.1	0.5	4.8	-1.8	-1.8	-20.8
Soybean Meal	0.8		3.1	1.4	-2.1	-2.1	-4.1
Cotton	-0.7	0.2	7.2	15.6	-4.4	-4.4	-12.2
Zinc	-1.4	-1.4	-0.7	-6.2	-8.1	-8.1	-31.6
Natural Gas	-0.1	1.2	-4.3	-6.3	-25.7	-25.7	-26.1

Historical

Historical										
Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
 BCOM Single Commodity Price 										
Palladium	57.9%	12.8%	55.3%	21.6%	-29.6%	11.2%	2.1%	7.2%	-18.3%	96.5%
WTI Crude	35.1%	-24.8%	12.5%	45.0%	-30.5%	-45.9%	7.2%	-7.1%	8.2%	15.1%
Nickel	4 34.2%	-16.5%	27.5%	13.5%	-41.8%	9.0%	-18.6%	-9.2%	-24.2%	33.8%
Gasoline	28.2%	-26.4%	8.1%	31.4%	-11.7%	-48.5%	-0.9%	4.7%	9.5%	19.5%
Coffee	27.3%	-19.3%	-7.9%	8.2%	-23.9%	50.5%	-23.0%	-36.6%	-5.7%	76.9%
Brent Crude	26.7%	-19.5%	17.7%	52.4%	-35.0%	-48.3%	-0.3%	3.5%	13.3%	21.6%
Soybean Oil	24.4%	-16.7%	-3.9%	12.7%	-4.4%	-17.6%	-21.0%	-5.6%	-9.8%	43.1%
Platinum	22.4%	-14.8%	3.6%	1.1%	-26.2%	-11.8%	-10.9%	9.9%	-21.1%	21.5%
Heating Oil	21.4%	-19.0%	21.8%	54.8%	-40.4%	-40.0%	1.1%	3.8%	15.4%	20.1%
Gas Oil	20.7%	-14.9%	19.8%	53.6%	-36.3%	-45.8%	1.9%	0.3%	21.2%	20.0%
Gold	18.9%	-2.1%	13.7%	8.6%	-10.5%	-1.5%	-28.3%	7.0%	10.2%	29.7%
Lean Hogs	17.0%	-15.0%	8.5%	10.6%	-26.4%	-4.9%	-0.3%	1.7%	5.7%	22.3%
Silver	, 15.6%	-9.4%	7.2%	15.8%	-11.5%	-19.5%	-35.9%	8.3%	-9.8%	83.7%
Sugar	12.3%	-20.6%	-22.3%	28.0%	5.0%	-11.5%	-15.9%	-16.3%	-27.5%	19.2%
Wheat	10.8%	17.9%	4.7%	-13.2%	-20.3%	-2.6%	-22.2%	19.2%	-17.8%	46.7%
Copper (CME)	6.5%	-20.3%	31.7%	17.4%	-24.4%	-16.8%	-7.0%	6.3%	-22.7%	32.9%
Soybeans	6.1%	-7.3%	-4.5%	14.4%	-14.5%	-22.3%	-7.5%	18.4%	-14.0%	34.0%
Copper (LME)	4.18	-17.4%	30.6%	17.3%	-25.8%	-13.9%	-6.8%	4.2%	-21.2%	31.2%
Corn	3.6%	6.9%	-0.4%	-1.9%	-9.6%	-5.9%	-39.6%	8.0%	2.8%	51.7%
Live Cattle	2.0%	1.9%	4.7%	-15.2%	-16.4%	21.5%	1.8%	8.9%	12.1%	25.9%
HRW Wheat	-0.7%	14.4%	2.1%	-10.7%	-25.2%	-2.2%	-22.9%	15.9%	-15.7%	58.7%
Aluminum	-0.8%	-19.3%	33.3%	12.5%	-17.9%	4.1%	-13.9%	2.5%	-18.8%	11.6%
Soybean Meal	-2.3%	-2.0%	-0.1%	18.4%	-27.5%	-16.7%	4.1%	35.9%	-16.4%	18.0%
Cotton	-4.5%	-8.2%	11.3%	11.6%	5.0%	-28.8%	12.6%	-18.1%	-36.6%	91.5%
Zinc	-6.8%	-25.6%	30.1%	60.2%	-26.2%	6.0%	-0.5%	12.2%	-25.2%	-3.5%
Natural Gas	-26.4%	-0.4%	-20.7%	59.3%	-19.1%	-31.7%	26.2%	12.1%	-32.1%	-20.9%

Performance - Volatility

Key Metrics

Name	Current [†]	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 										
Gold	12.0		0.0	24.6	-11.2	0.0	-3.3	24.7	-18.8	-32.3
Aluminum	12.5			-6.1	-10.9	0.0	-34.6	-25.6	-28.9	-33.8
Soybeans	14.0		0.0	23.0	-10.4	0.0	3.3	24.4	-17.1	-39.8
Live Cattle	14.2	I I	0.0	-11.3	-21.9	0.0	10.4	-23.8	-21.7	-20.8
Soybean Meal	14.9		0.0	5.3	-5.5	0.0	1.6	-3.0	-31.4	-47.4
Copper (LME)	15.4 (15.7 (0.0 0.0	-2.7 -2.2	15.4 -11.8	0.0 0.0	-22.1 -12.5	-13.1 -8.9	-26.3 -34.8	-15.5 -19.3
Copper (COMEX) Corn	15.7		0.0	-2.2	-11.0	0.0	9.1	33.7	-34.6	-19.5 -33.4
Platinum	17.10		0.0	-6.2	-4.2	0.0	3.7	36.7	-15.5	-55.4
Soybean Oil	17.5		0.0	22.4	14.3	0.0	29.3	20.3	-4.6	-10.5
Silver	18.6	1 1	0.0	14.2	-19.4	0.0	-5.4	20.0	-26.9	-38.9
Sugar	18.8		0.0	3.1	-16.5	0.0	-12.7	-13.2	-37.5	-6.7
Cotton	18.9		0.0	7.4	-14.6	0.0	-4.4	-16.2	-0.6	-11.8
Zinc	22.0	I I	0.0	0.7	-17.4	0.0	-9.9	3.5	-23.3	3.7
Wheat	23.2	I I	0.0	26.1	31.7	0.0	22.7	16.1	4.6	-11.3
Heating Oil	24.3		0.0	-14.2	-19.1	0.0	-32.9	29.3	-10.9	-31.3
Unlead Gas	24.4		0.0	-23.4	-32.9	0.0	-35.8	21.9	-2.8	-36.6
Gas Oil	24.6		0.0	-14.7	-19.2	0.0	-43.0	30.1	-14.4	-35.1
HRW Wheat	26.4	1.0	0.0	28.2	39.9	0.0	33.6	30.0	18.4	10.2
Crude Oil	26.5	10.2	0.0	-15.6	-26.4	0.0	-45.3	39.8	-6.9	-41.4
Brent Crude	26.7	8.8	0.0	-15.5	-26.9	0.0	-37.5	40.6	-8.6	-33.1
Palladium	29.4		0.0	4.8	-1.6	0.0	12.4	29.4	-1.2	38.9
Nickel	29.8		0.0	-1.0	-8.0	0.0	-0.6	5.4	-14.3	4.5
NaturalGas	32.9		0.0	-27.5	-33.0	0.0	-3.1	-3.9	-10.8	-28.5
Lean Hogs	36.1		0.0	-17.4	-16.4	0.0	27.1	74.0	47.8	64.4
Coffee	36.2	2.0	0.0	16.6	25.4	0.0	41.3	52.1	21.8	0.7
 BCOM 60 Day Historical Volatility 										
Gold	10.10	-0.4	0.0	-16.7	-28.0	0.0	-11.1	-2.5	-29.7	-45.9
Soybeans	11.50	1.6	0.0	-22.9	-37.4	0.0	-35.8	-10.5	-33.7	-56.6
Copper (LME)	12.40	-1.3	0.0	-7.0	-23.6	0.0	-26.9	-35.7	-46.4	-22.5
Aluminum	14.00	-2.4	0.0	-8.2	8.5	0.0	-7.0	-17.7	-12.2	-18.5
Soybean Meal	14.40	0.9	0.0	-9.7	-12.7	0.0	-13.9	-13.1	-35.9	-71.4
Sugar	14.80	-3.1	0.0	-39.1	-48.2	0.0	-37.2	-37.6	-43.3	-24.3
Copper (CME)	15.20	2.0	0.0	-0.6	-14.4	0.0	-27.0	-21.9	-31.5	-13.2
Silver	17.10	0.4	0.0	-24.8	-41.5	0.0	-7.5	-8.6	-41.6	-53.2
Soybean Oil	18.50	3.8	0.0	1.1	-3.0	0.0	19.4	32.6	-25.9	-20.1
Cotton	18.70	0.9	0.0	-10.6	-27.9	0.0	-19.6	0.0	8.8	-11.2
Zinc	20.20	0.3	0.0	-6.2	-25.0	0.0	-22.4	-3.2	-43.0	9.7
Platinum	20.30	0.6	0.0	-8.0	-15.8	0.0	12.6	18.9	-21.1	12.8
Wheat	20.50	-0.1	0.0	-3.9	-32.1	0.0	-11.4	-3.5	-25.1	-28.4
Gas Oil	20.70	-1.3	0.0	-34.0	-41.3	0.0	-34.9	4.0	-36.8	-18.6
Heating Oil	20.90	0.0	0.0	-34.4	-43.4	0.0	-32.7	-3.2	-34.2	-24.7
Corn	22.20	-0.5	0.0	-6.1	-26.8	0.0	57.9	61.0	-2.7	-16.1
Brent Crude	22.40	7.3	0.0	-42.9	-51.4	0.0	-49.3	10.9	-38.7	-29.8
Unlead Gas	24.10	1.7	0.0	-34.9	-50.5	0.0	-44.2	0.0	-25.7	-24.4
Palladium	24.60		0.0	10.2	-16.4	0.0	-8.6	32.6	-8.6	5.5
Crude Oil	25.70	0.5	0.0	-38.4	-47.2	0.0	-43.8	22.5	-29.6	-34.1
Nickel Gas	27.60		0.0	8.8	-17.6	0.0	37.6	-21.5	-13.0	8.4
Live Cattle	29.00		0.0	11.1	-7.7	0.0	13.8	53.2	33.3	111.4
HRW Wheat	29.00	-0.1	0.0	11.1	-7.7	0.0	13.8	53.2	33.3	12.1
Coffee	38.10	-1.9	0.0	21.8	38.7	0.0		69.0		21.2
							1.0		32.1	
Natural Gas	50.20	-0.3	0.0	11.6	47.0	0.0	-44.2	8.8	-11.9	-7.3
Lean Hogs	50.30	-0.7	0.0	11.0	-21.7	0.0	-16.3	62.6	-16.8	21.8

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

Key Metrics

lame	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	-2.4	-5.0	2.6	0.0	0.0	0.6	1.3	-0.7
 Sector 								
► Energy	3.5	-2.4	5.9	0.0	0.0	0.3	2.3	-2.3
► Livestock	1.4	-1.7	3.1	0.0	0.0	6.0	14.2	
 Industrial Metals 	-1.4	-1.2	-0.2	0.0	0.0	-0.4	-0.7	-0.0
 Precious Metals 	-2.3	-3.1	0.8	0.0	0.0	0.3	0.1	o.
► Agriculture	-5.6	-8.9	3.4	0.0	0.0	0.0	2.0	0.
 Single Commodities 								
Thermal Coal	12.5	6.1	6.4	0.3	0.3	-3.0	26.8	
Crude Oil	8.8	-7.1	15.9	0.0	0.0	3.3	3.0	3.
Brent Crude	8.7	-3.1	11.8	0.0	0.0	2.4	3.7	2.
Unleaded Gas	6.6	-3.2	9.8	0.0	0.0	0.0	-1.8	1.
Gas Oil	5.6	-4.0	9.6	0.0	0.0	1.9	-0.4	-0
Heating Oil	4.3	-3.4	7.7	0.0	0.0	1.7	-0.5	-1
Live Cattle	4.1	5.2	-1.1	0.0	0.0	0.4	8.6	-2
Zinc	1.5	3.4	-1.9	0.0	0.0	-0.8	-0.7	-1
Palladium	1.1	4.1	-3.0	0.0	0.0	0.1	-0.2	-0
Copper (LME)	-0.7	0.0	-0.8	0.0	0.0	0.2	0.3	0
Lean Hogs	-1.2	-8.6	7.4	0.0	0.0	11.6	19.8	-7
Copper (CME)	-1.2	-0.8	-0.4	0.0	0.0	0.8	0.5	0
Nickel	-1.8	-3.1	1.3	0.0	0.0	-0.6	-3.8	0
Platinum	-1.8	-2.0		0.0	0.0	-0.5	0.3	-0
Gold	-2.1	-2.9	0.8	0.0	0.0	0.0	0.1	0
Silver	-2.4	-3.3	0.9	0.0	0.0	0.7	0.2	0
Cotton	-2.5	-2.9		0.0	0.0	1.3	3.6	
Soybean Oil	-3.1	-6.2		0.0	0.0	1.4	1.8	
Soybean	-4.1	-7.2		0.0	0.0	2.3	0.4	
Aluminum	-4.6	-5.3		0.0	0.0	-1.6	0.1	
Soybean Meal	-4.7	-5.3		0.0	0.0	2.0	1.6	
Wheat	-4.9	-10.0		0.0	0.0	-3.2	2.2	
Corn	-6.1	-8.5		0.0	0.0	-0.7	-2.1	
Sugar	-7.2	-9.3		0.0	0.0	-1.4	-0.6	
Coffee	-8.0	-16.0		0.0	0.0	-1.1	4.6	
HRW Wheat	-8.6	-13.5		0.0	0.0	1.0	5.4	
Natural Gas	-22.2	-2.0		0.0	0.0	-4.3	-14.5	

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	2009
 1 Year Spread % of First Contract 	2.1				7.1						
► BCOM	-2.4	-5.0	-1.7	-2.2	-7.1	-4.4	0.3	-0.9	-2.0	2.3	-4.1
Sector											
► Energy	3.4	-2.2	4.3	0.4	-14.0	-11.3	3.5	-1.3	-2.5	-2.1	-9.4
 Livestock 	1.4	-1.7	6.5	8.1	0.6	8.3	4.1	-0.7	-0.2	-1.8	-4.8
 Industrial Metals 	-1.4	-1.2	-0.8	-0.8	-1.5	-0.8	-1.8	-2.5	-2.1	0.5	-2.3 -0.9
 Precious Metals 	-2.3	-3.1	-2.3	-1.7	-1.0	-0.8	-0.7	-0.7	-0.7	-0.9	
► Agriculture	-5.6	-8.9	-5.9	-4.2	-5.5	-5.6	-1.5	-2.3	-1.8	12.2	-0.3
 Single Commodities 											
Thermal Coal	, 12.2	7.5	5.4	18.4	14.0	1.7	1.9	-8.3	-6.2	11.2	-7.9
Crude Oil	8.8	-7.1	5.0	-5.9	-20.4	-13.5	7.3	-1.3	1.4	-3.2	-6.7
Brent Crude	8.7	-3.1	6.3	-3.1	-22.1	-16.4	4.9	6.3	4.0	-0.4	-8.3
Unleaded Gas	6.6	-3.2	4.7	2.8	1.0	-12.3	7.0	9.8	7.9	3.7	-2.9
Gas Oil	5.6	-4.0	6.2	-4.8	-23.8	-12.0	3.1	2.9	3.0	-4.2	-11.0
Heating Oil	4.3	-3.4	5.9	-4.5	-24.5	-4.5	3.2	2.1	2.1	-3.4	-8.0
Live Cattle	4.1	5.2	6.3	13.3	8.1	7.0	2.5	-3.3	-4.5	-3.8	-4.3
Zinc	, 1.5	3.4	3.4	0.2	-2.8	-1.4	-2.3	-4.5	-3.9	-1.7	-3.2
Palladium	1.1	4.1	1.5	-0.5	-0.2	-0.1	-0.5	-0.2	-0.4	0.0	-0.3
Copper (LME)	-0.7	0.0	-1.3	-0.3	0.3	1.6	1.1	-0.7	-0.3	2.7	-0.9
Lean Hogs	-1.2	-8.6	6.7	2.9	-7.0	9.6	5.7	2.0	4.2	0.2	-5.3
Copper (CME)	-1.2	-0.8	-1.8	-0.8	-1.1	-0.2	1.3	-1.1	-0.8	2.5	-1.2
Nickel	-1.8	-3.1	-2.0	-1.9	-1.4	-1.1	-1.8	-1.4	-0.1	1.1	-1.1
Platinum	-1.8	-2.0	-1.4	-1.1	-0.4	-0.4	-0.5	-0.7	-1.0	-0.5	-1.2
Gold	-2.1	-2.9	-2.2	-1.5	-0.5	-0.3	-0.4	-0.7	-0.9	-0.9	-1.0
Silver	-2.4	-3.3	-2.5	-2.0	-1.4	-1.2	-0.9	-0.7	-0.5	-0.9	-0.8
Cotton	-2.5	-2.9	6.1	1.7	-2.7	-8.6	6.7	-5.7	3.6	34.6	-2.6
Soybean Oil	-3.1	-6.2	-1.1	-1.2	-3.1	-0.9	-3.8	-2.8	-1.6	-0.9	-5.3
Soybean	-4.1	-7.2	-3.3	0.4	-2.0	0.9	13.1	7.7	-1.2	5.9	1.7
Aluminum	-4.6	-5.3	-2.3	-1.0	-2.7	-3.1	-7.5	-5.0	-5.2	-2.3	-5.0
Soybean Meal	-4.7	-5.3	-3.4	-0.4	-5.7	9.8	19.9	12.5	-2.4	9.9	9.5
Wheat	-4.9	-10.0	-15.5	-17.1	-10.5	-5.0	-7.2	-6.9	-12.4	-8.7	-15.3
Corn	-6.1	-8.5	-12.1	-10.5	-9.5	-8.1	-9.2	12.7	7.2	9.4	-8.5
Sugar	-7.2	-9.3	-3.5	4.8	0.9	-13.1	-8.2	-5.5	-0.3	26.0	21.9
Coffee	-8.0	-16.0	-10.9	-9.2	-8.4	-7.4	-11.2	-11.5	-4.9	6.1	-5.7
HRW Wheat	-8.6	-13.5	-19.1	-16.1	-14.9	-6.3	-5.5	-5.7	-7.9	-3.1	-12.7
Natural Gas	-22.2	-2.0	-3.7	-0.1	-22.6	-22.2	-3.2	-20.7	-29.9	-18.4	-21.1

Curve Analysis - Gross Roll Yield

Key Metrics

Key Metrics										
Name		Current 1Yr Yld			Yld 'r Ago fra	Change om 1 Yr Ago	Yld 2 Yr Ago	Change from 2 Yr Ago		
 1 Year Gross Yield 									1	
 Sector Roll Yield 										
BCOM Industrial Metals		1.5		.5	0.7	0.8	-2.0	3.5		
BCOM Energy		0.2		7	3.6	-3.4	-8.2	8.5		
BCOM Precious Metals		-1.0			-0.7	-0.3	-1.1	0.1		
BCOM		-2.7		.0	-0.7	-2.0	-5.9	3.2		
BCOM Grains		-6.9		.0	-10.1	3.3	-10.6	3.7		
BCOM Softs		-9.8		.7	-4.5	-5.3	-4.2	-5.6		
BCOM Livestock		-12.3		.9	1.8	-14.1	0.5	-12.8	\$	
BCOM Agriculture			-/	.5	-7.1					
 Commodities Roll Yield 									_	
Unlead Gas		16.4		.1	-2.7	19.1	-5.2	21.5		
Brent Crude		12.9		.5	4.7	8.2	-3.4	16.3		
Zinc		6.9		.8	4.2	2.7	-0.4	7.3		
Heating Oil		5.3		.2	2.5	2.8	-7.2	12.5		
Gas Oil Crude Oil		3.8 2.6		.8 .0	3.9 3.7	-0.1 -1.0	-0.9	4.7 9.7		
Nickel		2.0		9	0.1	-1.0	-7.1 -1.9	2.9		
		0.2		.9	-2.1	2.3	-1.9	2.2		
Copper (CME) Gold		-0.4			-0.3	-0.2	-2.0	0.4		
Platinum		-0.4		.1	0.0	-0.2	-0.6	0.1		
Silver		-0.3			-0.3	-0.4	-0.9	0.2		
Wheat		-1.7			-14.3	12.6	-17.2	15.5		
Aluminum		-1.9			2.4	-4.3	-2.1	0.2		
Cotton		-2.1		.1	0.9	-3.0	1.2	-3.3		
Soybean Meal		-4.5		.1	-2.3	-2.1	-4.7	0.2		
Soybean Oil		-5.3		.5	-2.5	-2.8	-3.1	-2.2		
Soybean		-7.4		.5	-4.4	-3.0	-3.6	-3.8		
Corn		-8.6			-11.5	2.9	-11.7	3.1		
HRW Wheat		-9.0		.9	-17.5	8.4	-17.0	8.0		
Sugar		-9.6		.1	-5.4	-4.2	-3.1	-6.5		
Natural Gas		-11.0		.4	2.0	-13.0	-19.1	8.1		
Coffee		-15.2			-7.2	-8.0	-8.1	-7.1		
Lean Hogs		-36.3	7	.2	4.1	-40.4	-5.7	-30.6	5	
Historical										
Name	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
✓ 1 Year Gross Yield	2017	2010	2017	2010	2010	2011	2015	2012	2011	2010
Sector Roll Yield										
BCOM Industrial Metals	1.5	0.7	-3.0	-2.0	-1.8	-2.1	-3.9	-3.3	-2.2	-4.1
BCOM Energy	0.2	3.6	-7.7	-32.5	-12.6		-5.1	-11.7	-11.0	-13.8
BCOM Precious Metals	-1.0	-0.7	-0.2	-1.1	-0.6			-0.9	-0.6	-1.1
BCOM	-2.7	-0.7	-5.9	-11.4	-6.3			-4.7	-6.6	-9.5
BCOM Grains	-6.9	-10.1	-10.7	-7.0	-4.7		8.2	3.6	-5.8	-12.6
BCOM Agriculture	-7.8	-7.1	-8.0	-6.1	-4.1			1.9	-1.9	-9.6
BCOM Softs	-9.8	-4.5	-4.2	-5.6	-7.4		-4.9	0.9	9.0	0.5
BCOM Livestock	-12.3	1.8	0.5	0.2	1.1		-4.5	-9.8	-12.3	-14.8
 Commodities Roll Yield 										
Unlead Gas	16.8	-0.6	-4.0	-27.2	1.1	L 4.7	1.3	18.9	4.5	-6.9
Brent Crude	12.9	4.7	-4.9	-27.7	-23.3			4.2	8.3	-12.5
Zinc	6.9	4.2	-3.1	-2.7	-2.5			-3.1	-3.0	-5.3
Heating Oil	4.3	3.4	-6.4	-25.3	-3.0			1.0	-2.9	-11.7
Gas Oil	3.8	3.9	-0.9	-22.7	-11.0			7.4	2.1	-12.3
Nickel	1.1	0.1	-0.6	-1.7	0.5			-1.0	-1.7	-1.6
Copper (CME)	1.0	-1.0	-3.5	-1.6	-0.7			-1.3	-0.1	-3.6
Crude Oil	0.0	4.4	-7.3	-38.2	-14.0		-0.3	-4.5	-9.7	-11.3
Platinum	-0.5	0.0	-1.1	-0.4	-0.2			-1.2	0.9	-2.7
Live Cattle	-0.5	0.6	4.4	7.8	2.0			-12.8	-12.5	-12.2
Gold	-0.8	-0.7	-0.3	-0.9	-0.4			-0.9	2.9	-1.0
Silver	-1.5	-0.8	0.1	-1.8	-1.2			-1.1	4.5	-5.1
Wheat	-1.7	-14.3	-18.0	-10.9	-1.9			-9.4	-14.6	-23.8
Aluminum	-1.9	2.4	-3.2	-2.9	-6.0			-6.2	-3.3	-6.0
Cotton	-2.1	0.9	1.0	-1.1	-2.1			5.2	15.5	14.3
Sovbean Meal	-4 5	-2.3	-4.8	-0.5				13.0	-13	20.7

-4.5

-5.3

-7.4

-8.6

-9.0

-9.6

-11.7

-15.2

-36.3

-2.3

-2.5

-4.4

-11.5

-17.5

-5.4

0.3

-7.2

4.1

-4.8

-2.9

-3.0

-12.4

-17.8

-3.2

-14.0

-9.2

-8.2

-0.5

-5.4

0.2

-7.9

-14.7

-5.2

-52.6

-9.7

-13.6

9.6

-3.2

-0.2

-9.6

-7.6

-9.9

-19.8

-7.8

0.3

28.7

-2.9

17.0

-7.4

-2.5

0.8

0.6

-19.5

-12.6

16.5

-1.3

18.5

9.4

-3.3

-4.1

-22.3

-7.2

-1.7

2009

-16.7

-51.8

-1.1

-21.8

-2.5

-8.3

-24.7

-20.2

-16.9

-55.6

-11.2

-25.3

-20.5

-7.3

-7.1

-70.3

-6.2

-9.6

-1.1

-1.5

-14.7

-13.6

-24.1

30.2

-6.9

16.1

-11.8

-4.7

-41.8

-47.6

-11.1

-30.8

20.7

-8.5

0.5

-20.9

-9.9

4.6

-16.1

-8.5

-23.8

13.0

-4.2

5.5

10.8

-4.1

3.1

-42.7

-5.0

-4.5

-1.3

-4.2

-1.8

0.4

-7.6

18.7

-13.8

-3.4

-9.6

Bloomberg

Soybean Meal

Soybean Oil

Soybean

HRW Wheat

Natural Gas

Lean Hogs

Corn

Sugar

Coffee

Bloomberg Commodity Index (BCOM)

Curve Analysis - Forwards / Forecasts

Spread %

Name	12/2019	11/2019	10/2019	9/2019	8/2019	7/2019	6/2019	5/2019	4/2019	3/2019	2/2019
 1 Yr Spread ((Forward-Forecast)/ Forecast) 											
 Energy 											
WTI Crude Spread %	2.5	1.9	0.9	-0.2	-1.7	-2.6	-2.0	-5.0	1.8	-1.9	-3.3
Brent Crude Spread %	1.2	0.7	-0.5	-1.1	-2.8	-3.7	-2.0	-4.9	0.6	-2.5	-1.6
ULS Diesel Spread %	-0.8	-2.1	-1.3		-4.0	-7.7	-10.9	-11.7	-5.2		-4.3
Unleaded Gasoline Spread %	-0.4	-2.2	-2.8		-5.8	-6.1	-6.9	-9.2	-1.6	-2.5	-5.5
▼ Soft											
Sugar Spread %	0.2	-1.4	-1.9	-1.6	-4.4	-4.0	-1.5	-4.9	-3.2	-0.1	4.8
Coffee Spread %	5.4	1.9	-3.0	-3.1	-8.7	-5.3	1.7	0.2	-13.8	-11.0	-15.1
Cotton Spread %	-2.7	-3.1	-1.9	-2.5	-12.3	-9.5	-7.4	-7.6	-1.9	-2.3	-5.7
 Industrial Metals 											
Copper Spread % (LME)	0.4	0.0	0.1	-0.5	-2.4	-2.9	-3.4	-5.1	-0.6	-2.5	-0.9
Aluminum Spread %	-1.2	-1.0	-1.3	-2.4	-2.3	-1.6	-3.2	-7.0	-6.4	-5.6	-4.8
Zinc Spread %	-0.6	-1.3	1.1	-0.1	-4.4	-1.5	-2.8	-4.0	0.2	2.0	0.0
Nickel Spread %	-0.2	-2.6	3.8	11.8	13.9	6.5	-0.4	-3.7	-3.8	-0.3	1.8
 Precious Metals 											
Gold Spread %	1.3	0.2	0.7	1.1	4.6	2.9	3.5	-1.9	-1.5	0.9	3.7
Silver Spread %	1.5	1.3	2.2	2.7	6.7	2.7	-1.9	-6.5	-5.2	-4.7	-1.2
• Grain											
Corn Spread %	-3.3	-3.7	-2.9	-5.5	-7.3	2.2	6.1	9.2	-3.5	-1.1	-2.3
Soybeans Spread %	-1.1	-1.3	-0.9	-1.7	-2.8	-3.0	-3.1	-3.5	-5.3	-3.6	-3.3
Wheat Spread %	-0.2	-0.3	-0.9	-0.9	-4.6	-2.2	3.8	4.6	-8.6	-5.3	-5.1

Data Set

Name	: 12/2019	11/2019	10/2019	9/2019	8/2019	7/2019	6/2019	5/2019	4/2019	3/2019	2/2019
• Data Set											
 1 Yr Spread 											
✓ Energy											
Natural Gas Forward	2.50	2.52	2.57	2.53	2.50	2.47	2.55	2.70	2.74	2.87	2.92
WTI Crude Forward	[•] ! 58.4	58.1	57.6	57.9	57.7	58.7	59.3	57.7	62.0	59.1	58.0
WTI Crude Forecast	57.0	57.0	57.0	58.0	58.7	60.3	60.5	60.8	60.9	60.3	60.0
Brent Crude Forward	`! 64.8	64.5	63.7	64.0	63.6	65.2	65.8	65.1	68.9	65.9	65.8
Brent Crude Forecast	64.0	64.0	64.0	64.7	65.5	67.7	67.1	68.5	68.5	67.6	66.9
ULS Diesel Forward	1.93	1.93	1.93	1.94	1.92	1.96	1.97	1.95	2.05	1.99	2.02
ULS Diesel Forecast	1.95	1.98	1.95		2.00	2.12	2.21	2.21	2.16		2.12
Unleaded Gasoline Forward	1.74	1.74	1.73	1.72	1.71	1.76	1.77	1.73	1.83	1.72	1.67
Unleaded Gasoline Forecast	1.75	1.78	1.78		1.82	1.88	1.90	1.90	1.86	1.76	1.76
 Soft 											
Sugar Forward	0.13	0.12	0.12	0.12	0.12	0.12	0.13	0.12	0.13	0.13	0.13
Sugar Forecast	0.13	0.13	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Coffee Forward	1.06	1.02	0.97	0.97	0.95	0.98	1.02	1.00	0.95	0.98	1.02
Coffee Forecast	,1 1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.00	1.10	1.10	1.21
Cotton Forward	0.66	0.66	0.66	0.64	0.64	0.66	0.68	0.70	0.75	0.75	0.73
Cotton Forecast	0.68	0.68	0.67	0.66	0.73	0.73	0.73	0.76	0.77	0.77	0.77
 Industrial Metals 											
Copper Forward (LME)	46 6,025	5,988	5,998	5,972	5,954	6,055	6,077	6,008	6,387	6,351	6,472
Copper Forecast (LME)	6,000	5,987	5,990	6,000	6,100	6,235	6,292	6,331	6,425	6,515	6,531
Aluminum Forward	1,785	1,782	1,787	1,782	1,784	1,809	1,803	1,806	1,843	1,906	1,927
Aluminum Forecast	1,807	1,800	1,811	1,826	1,826	1,838	1,863	1,942	1,970	2,020	2,025
Zinc Forward	2,519	2,518	2,567	2,509	2,486	2,578	2,589	2,634	2,779	2,813	2,708
Zinc Forecast	2,535	2,550	2,540	2,510	2,600	2,616	2,663	2,744	2,774	2,758	2,707
Nickel Forward	13,927	13,902	14,425	14,537	14,267	13,341	12,511	12,269	12,487	12,834	12,990
Nickel Forecast	13,955	14,274	13,900	13,000	12,530	12,530	12,561	12,742	12,983	12,875	12,766
 Precious Metals 											
Gold Forward	/ 1,406	1,400	1,407	1,409	1,419	1,378	1,370	1,299	1,295	1,306	1,331
Gold Forecast	1,387	1,398	1,397	1,393	1,356	1,340	1,323	1,325	1,315	1,294	1,284
Silver Forward	16.41	16.32	16.47	16.40	16.62	15.92	15.28	14.85	15.17	15.26	15.90
Silver Forecast	16.16	16.12	16.12	15.97	15.58	15.50	15.58	15.88	16.00	16.00	16.09
Platinum Forecast	864	860	860	860	860	860	858	875	878	869	900
Palladium Forecast	1,502.4	1,475.0	1,438.0	1,425.0	1,395.0	1,393.0	1,320.2	1,300.0	1,280.9	1,246.9	1,148.8
• Grain											
Corn Forward	4 3.8	3.8	3.8	3.8	3.8	4.0	4.2	4.2	3.7	3.8	3.8
Corn Forecast	* 3.9	3.9	4.0	4.0	4.1	3.9	3.9	3.8	3.8	3.9	3.9
Soybeans Forward	<u>ا</u> ۹ 8.9	8.8	8.9	8.8	8.7	8.8	8.9	8.9	8.7	9.1	9.3
Soybeans Forecast	9.0	8.9	9.0	8.9	9.0	9.1	9.2	9.2	9.2	9.4	9.6
Wheat Forward	,5 5.0	4.9	4.9	4.8	4.7	4.9	5.1	5.0	4.5	4.7	4.8
Wheat Forecast	15.0	4.9	4.9	4.8	5.0	5.0	4.9	4.8	4.9	5.0	5.1

Market Flows - Open Interest

Key Metrics

Name	Current	MTD % Change	3 Mth % Change	YTD % Change	1↓ Yr % Change	2 Yr % Change	2 Year High
 Open Interest (Aggregate - 1,000s) 							
 Single Commodities 							
Gold	786	1.8	28.9	1.8	74.3	58.8	786
Silver	230	1.3	8.0	1.3	30.7	18.6	244
Nickel	182	0.0	7.1	0.0	30.0	21.3	211
Lean Hogs	282	0.4	6.4	0.4	29.4	15.6	319
Heating Oil	438	0.5	8.4	0.5	19.4	0.0	491
Platinum	99	1.0	15.1	1.0	19.3	20.7	100
Copper (CME)	267	-0.7	13.6	-0.7	18.7	-6.3	318
Brent Crude	2,557	0.0	9.2	0.0	18.5	10.1	2,737
Copper (LME)	189	0.0	31.3	0.0	17.4	-6.9	212
Sugar	992	0.0	11.5	0.0	13.2	31.7	1,088
Gas Oil	898	0.0	-13.2	0.0	9.9	3.8	1,138
Aluminum	517	0.0	-11.6	0.0	9.3	-0.6	606
Soybean	714	-0.1	0.7	-0.1	7.4	0.9	976
Soybean Oil	501	-0.8	2.9	-0.8	5.5	12.8	606
Zinc	149	0.0	1.4	0.0	4.9	-25.5	225
Cotton	223	0.0	-5.1	0.0	4.7	-20.1	322
Natural Gas	1,291	1.1	12.5	1.1	4.6	-10.2	1,700
Coffee	278	0.0	5.7	0.0	2.2	27.5	357
Crude Oil	2,148	0.7	3.7	0.7	1.6	-12.8	2,714
Live Cattle	379	-0.3	18.4	-0.3	0.8	13.1	455
Soybean Meal	429	-0.7	2.1	-0.7	0.2	13.8	538
Unlead Gas	382	0.5	14.0	0.5	-2.1	-0.3	501
Wheat	411	0.5	11.7	0.5	-7.4	-22.0	573
Corn	1,473	-0.3	-8.8	-0.3	-7.6	-4.5	2,007
HRW Wheat	265	-1.5	-12.5	-1.5	-10.2	-19.9	342
Palladium	24	0.0	0.0	0.0	-11.1	-35.1	40

Historical

HISTORICAL										
Name	2019 ↓	2018	2017	2016	2015	2014	2013	2012	2011	2010
 Open Interest (Aggregate - 1,000s) 										
► BCOM	14,860	13,672	14,620	12,978	11,965	10,881	11,033	10,367	9,282	10,206
✓ Sector										
Energy	7,681	7,072	7,928	7,097	6,057	5,033	5,346	4,980	4,230	4,262
 Agriculture 	5,300	5,239	5,168	4,493	4,563	4,211	4,090	3,876	3,418	4,399
 Industrial Metals 	1,306	1,135	1,354	1,319	1,178	1,224	1,104	1,006	1,159	1,105
 Precious Metals 	1,121	731	786	667	673	620	613	658	585	783
 Livestock 	661	581	572	501	431	481	591	578	552	534
 Single Commodities 										
Brent Crude	2,557	2,158	2,322	2,159	2,031	1,513	1,443	1,285	886	873
Crude Oil	2,134	2,105	2,458	2,064	1,671	1,468	1,616	1,473	1,328	1,430
Corn	1,477	1,582	1,540	1,236	1,334	1,237	1,203	1,128	1,151	1,549
Natural Gas	1,277	1,216	1,448	1,243	957	939	1,291	1,165	1,011	772
Sugar	992	876	753	805	879	836	830	754	559	613
Gas Oil	898	817	865	802	700	435	477	512	458	619
Gold	772	448	472	416	415	372	380	428	419	585
Soybean	715	664	705	632	646	599	576	546	460	629
Aluminum	517	473	520	541	551	595	539	495	682	546
Soybean Oil	, 505	476	444	372	384	355	340	306	273	358
Heating Oil	436	369	449	429	342	346	279	263	269	301
Soybean Meal	432	429	376	329	402	341	262	212	194	192
Wheat	409	435	523	448	368	371	411	456	384	492
Live Cattle	380	370	333	306	265	266	327	329	317	327
Unlead Gas	380	408	387	400	355	332	239	282	277	267
Lean Hogs	281	211	239	194	166	215	264	248	235	207
Coffee	278	272	218	191	172	160	142	144	105	140
Copper (CME)	269	219	280	224	166	160	167	147	121	167
HRW Wheat	269	293	330	239	193	132	154	158	139	219
Silver	227	174	194	164	168	151	132	141	106	136
Cotton	223	213	279	242	185	178	172	171	152	207
Copper (LME)	189	161	203	209	146	155	132	130	143	196
Nickel	182	140	150	160	148	132	81	69	65	61
Zinc	149	142	200	184	167	182	184	166	148	135
Platinum	98	82	83	63	65	64	62	60	42	39
Palladium	24	26	37	24	24	33	39	29	18	23

Market Flows - Commitment of Traders

Key Metrics

Name	Current	5 Day Change	1 Mth Change	3 Mth Change	YTDJ Change	1 Yr Change	2 Yr Change
 Net - Managed Money Total/Disagg 							
 Single Commodities 							
Brent Crude	402,455	4,095	91,151	132,552	240,206	240,206	-158,829
Gold	242,919	23,651	17,231	-49,147	185,970	185,970	133,000
Soybean Oil	119,420	16,080	37,064	97,021	170,922	170,922	116,014
WTI Crude	279,840	7,622	146,259	81,731	162,239	162,239	-132,132
Coffee	43,181	5,168	52,188	89,030	99,527	99,527	101,027
Sugar	26,374	10,208	165,103	240,228	65,746	65,746	99,430
Gasoline	106,018	12,567	16,044	42,750	52,902	52,902	26,568
Platinum	41,825	2,655	17,590	16,553	46,389	46,389	46,035
Silver	54,570	17,996	13,854	3,936	45,994	45,994	61,675
Wheat	19,149	-5,593	21,198	37,928	36,153	36,153	164,884
Copper (CME)	9,487	2,378	43,216	62,142	29,683	29,683	-90,033
Heating Oil	20,304	3,883	12,794	9,857	17,928	17,928	-61,520
Nickel	42,230	-664	-1,792	12,113	13,772	5 ,0 41	22,602
Aluminum (Post- MiFID II)	177,878	4,691	22,351	42,050	4,691	43,988	
Aluminum (Pre- MiFID II)	163,475	6,307	-3,292	21,105	3,315	-10,481	115,362
Cotton	18,525	10,593	31,631	43,763	2,522	2,522	-83,877
Live Cattle	88,517	454	6,968	94,334	2,258	2,258	5,807
Zinc (Post MiFID II)	53,843	281	-4,727	21,654	281	17,331	
Zinc (Pre MiFID II)	79,906	-1,121	-6,682	3,640	-471	-8,898	44,606
Palladium	12,469	-1,470	-307	-1,303	-746	-746	-13,346
Copper (LME) (Post MiFID II)	41,481	-4,539	3,299	32,991	-4,539	10,973	
HRW Wheat	-5,138	3,775	20,981	31,059	-7,573	-7,573	29,284
Lean Hogs	6,890	7,951	883	-14,565	-17,849	-17,849	-47,067
Soybeans	-33,156	46,119	-51,608	8,532	-22,611	-22,611	35,935
Soybean Meal	-24,346	6,999	-4,786	23,637	-23,732	-23,732	-55,603
Copper (LME) (Pre MiFID II)	37,448	-917	-16,651	-27,111	-31,597	-34,385	25,052
Corn	-84,906	9,931	38,624	74,984	-182,718	-182,718	121,718
Natural Gas	-245,351	-7,378	-109,158	-169,698	-438,461	-438,461	-192,905

Historical

20101	0040	0047	0.044	0.045	0.044	0040	0.040	0.044	0040
2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
							704 040 0		
L.OM	911,257.0	1.2M	1.8M	107,932.0	1.1M	835,105.0	791,313.0	637,042.0	1.6M
5(2) 2(4) 0	500 450 0	1 14	1.014	05 035 0	270 700 0	(22,220,0	250 720 0	222 444	224 226 0
				· · ·					
									232,650
									133,520
/9,103									962,170
-	302,863	437,560	423,576	90,351	218,292	35,635	14,988	-4,018	39,105
400.455	1 (2) 2 (2)	544 004	45 4 505	1 () ()	445 574	104 414	105 007	01 507	
M .									
									217,046
		109,919	41,247	-24,263	98,391	34,104	101,922	111,919	169,987
									56,961
									67,205
									104,412
		-7,105	39,098	6,282	17,051	5,573	23,113	6,200	26,836
									36,182
		-4,210	8,223	9,052	17,898	14,689	29,228	11,379	22,793
26,374	-39,372	-73,056	138,442			-25,626	19,000	43,792	141,534
20,304	2,376	81,824	33,541	-35,339	-27,087	26,602	23,945	19,644	36,104
19,149	-17,004	-145,735	-108,927	-83,120	20,481	-71,468	-11,899	-29,252	36,542
18,525	16,003	102,402	76,052	51,307	11,005	43,288	25,828	6,683	40,645
12,469	13,215	25,815	12,742	8,690	19,970	15,660	16,769	5,212	13,034
9,487	-20,196	99,520	72,131	-25,964	-4,455	35,635	14,988	-4,018	39,105
6,890	24,739	53,957	54,535	13,444	37,193	40,840	51,329	35,913	29,108
-5,138	2,435	-34,422	9,085	-14,975	24,999	8,022	23,619	9,128	49,108
-24,346	-614	31,257	19,537	-40,843	54,132	57,931	41,489	-15,232	40,129
-33,156	-10,545	-69,091	107,075	-63,515	39,446	136,683	109,007	23,683	164,287
-84,906	97,812	-206,624	-113,648	-136,111	239,704	-94,812	140,109	148,653	396,782
-245,351	193,110	-52,446	174,043	-161,686	-53,308	134,994	-89,820	-124,269	-96,119
1	37,448	69,045	67,384	9,065					-
	163,475	160,160	145,790						
1									
	1.0M 563,266.0 351,783 95,407 79,103 402,455 279,840 242,919 177,878 119,420 106,018 88,517 54,570 53,843 43,181 41,825 41,481 26,374 20,304 19,149 18,525 12,469 9,487 6,890 -5,138 -24,346 -33,156 -84,906	20,304 2,376 19,149 -17,004 18,525 16,003 12,469 13,215 9,487 -20,196 6,890 24,739 -5,138 2,435 -24,346 -614 -33,156 -10,545 -84,906 97,812 -245,351 193,110 37,448	1.0M 911,257.0 1.2M 563,266.0 528,452.0 1.1M 351,783 74,176 124,419 95,407 110,998 136,667 79,103 -59,133 -449,709 302,863 437,560 402,455 162,249 561,284 279,840 117,601 411,972 242,919 56,949 109,919 177,878 133,889 119,420 -51,502 3,406 106,018 53,116 79,450 88,517 86,259 82,710 54,570 8,576 -7,105 53,843 36,512 43,181 43,181 -56,346 -57,846 41,825 -4,564 -4,210 41,825 -4,564 -4,210 41,825 16,0318 102,402 12,469 13,215 25,815 9,487 -20,196 99,520 6,890 24,739 53,957 -5,138 2,435	1.0M 911,257.0 1.2M 1.8M 563,266.0 528,452.0 1.1M 1.0M 351,783 74,176 124,419 101,310 95,407 110,998 136,667 147,051 79,103 -59,133 -449,709 225,844 302,863 437,560 423,576 402,455 162,249 561,284 454,585 279,840 117,601 411,972 307,909 242,919 56,949 109,919 41,247 177,878 133,889 - 119,420 -51,502 3,406 85,522 106,018 53,116 79,450 50,991 88,517 86,259 82,710 92,516 54,570 8,576 -7,105 39,098 53,843 36,512 - 43,181 -56,346 -57,846 12,706 41,825 -4,564 -4,210 8,223 41,481 305,872 -73,056 138,442 20,304 2,376 81,824 3,541	1.0M 911,257.0 1.2M 1.8M 107,932.0 563,266.0 528,452.0 1.1M 1.0M 95,835.0 351,783 74,176 124,419 101,310 -239 95,407 110,998 136,667 147,051 24,525 79,103 -59,133 -449,709 225,844 -75,733 302,863 437,560 423,576 90,351 402,455 162,249 561,284 454,585 163,672 279,840 117,601 411,972 307,909 100,797 242,919 56,9389 10 10,797 177,878 133,889 - - 119,420 -51,502 3,406 85,522 60,895 106,018 53,116 79,450 50,091 28,391 88,517 86,259 82,710 92,516 11,081 54,570 8,564 -4,210 8,223 9,052 41,81 305,872 -73,056 138,442 165,810	1.0M 911,257.0 1.2M 1.8M 107,932.0 1.1M 563,266.0 528,452.0 1.1M 1.0M 95,835.0 278,790.0 351,783 74,176 124,419 101,310 -239 153,310 95,407 110,998 136,667 147,051 24,525 117,295 79,103 -59,133 -449,709 225,844 -75,733 383,375 302,863 437,560 423,576 90,351 218,292 402,455 162,249 561,284 454,585 163,672 115,571 279,840 117,601 411,972 307,909 100,797 199,388 242,919 56,949 109,919 41,247 -24,263 98,391 177,878 133,889 - - - - 119,420 -51,502 3,406 85,522 60,895 35,047 106,018 53,116 79,450 50,091 28,391 44,226 88,517 8,576 -7,105	1.0M 911,257.0 1.2M 1.8M 107,932.0 1.1M 835,105.0 563,266.0 528,452.0 1.1M 1.0M 95,835.0 278,790.0 623,230.0 351,783 74,176 124,419 101,310 -239 153,310 70,026 95,407 110,998 136,667 147,051 24,525 117,295 137,611 79,103 -59,133 -449,709 225,844 -75,733 383,375 -1,048 302,863 437,560 423,576 90,351 218,292 35,635 402,455 162,249 561,284 454,585 163,672 115,571 136,611 279,840 117,601 411,972 307,909 100,797 198,8391 34,104 177,878 133,889 119,420 -51,502 3,406 85,522 60,895 35,047 -46,649 106,018 53,116 79,450 50,091 28,391 44,226 54,637 88,517 86,259 82,710 92,516 <td>$\begin{array}{ c c c c c c c c c c c c c c c c c c c$</td> <td>1.0M 911,257.0 1.2M 1.8M 107,932.0 1.1M 835,105.0 791,313.0 637,042.0 563,266.0 528,452.0 1.1M 1.0M 95,835.0 278,790.0 623,230.0 258,739.0 230,666.0 351,783 74,176 124,419 101,310 -239 153,310 70,026 171,032 134,710 95,007 110,998 136,667 147,051 24,525 117,295 137,611 110,898 104,018 79,103 -59,133 -449,709 225,844 -75,733 383,375 -1,048 281,653 188,257 302,863 437,560 423,576 90,351 218,292 35,635 14,988 -4,018 402,455 162,249 56,1284 454,585 163,672 115,571 136,611 125,397 81,537 2279,840 117,601 411,972 307,909 100,797 199,388 270,386 14,883 192,464 119,177,878 133,889 41,226 54,637 64</td>	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	1.0M 911,257.0 1.2M 1.8M 107,932.0 1.1M 835,105.0 791,313.0 637,042.0 563,266.0 528,452.0 1.1M 1.0M 95,835.0 278,790.0 623,230.0 258,739.0 230,666.0 351,783 74,176 124,419 101,310 -239 153,310 70,026 171,032 134,710 95,007 110,998 136,667 147,051 24,525 117,295 137,611 110,898 104,018 79,103 -59,133 -449,709 225,844 -75,733 383,375 -1,048 281,653 188,257 302,863 437,560 423,576 90,351 218,292 35,635 14,988 -4,018 402,455 162,249 56,1284 454,585 163,672 115,571 136,611 125,397 81,537 2279,840 117,601 411,972 307,909 100,797 199,388 270,386 14,883 192,464 119,177,878 133,889 41,226 54,637 64

Bloomberg Commodity Index (BCOM)

Market Flows - ETF Flows (annual)

Name	2019J	2018	2017	2016	2015	2014	2013	2012	2011	2010
▼ ETFs (\$ Billion AUM)										
 Total ETF Assets Under Management (\$ 1 	176.27	136.45	141.73	120.33	86.90	101.21	110.90	195.26	171.14	166.46
 Precious Metals 	151.96	109.79	109.98	90.30	62.95	77.79	84.93	164.56	142.19	130.39
► Gold	134.48	97.27	95.36	76.91	51.78	62.75	68.70	143.55	120.89	105.90
► Silver	12.09	9.02	10.11	9.41	7.24	8.64	10.60	16.18	16.38	18.41
Platinum	3.11	1.92	2.39	2.26	2.22	3.32	3.46	2.48	2.49	2.83
► Palladium	1.15	0.83	1.28	1.07	1.24	2.30	1.40	1.37	1.32	2.12
Precious Metals Basket	1.00	0.65	0.70	0.57	0.40	0.64	0.68	0.92	1.07	1.13
► Other	0.14	0.09	0.15	0.08	0.06	0.13	0.10	0.06	0.02	
 Broad Commodity 	14.38	16.26	17.20	14.78	10.84	14.55	17.70	19.57	18.21	19.74
► Energy	7.35	7.34	11.13	12.25	10.71	5.39	4.61	6.70	5.78	9.63
► Agriculture	1.36	1.78	1.78	1.82	1.74	2.37	2.61	3.10	3.89	5.22
 Industrial Metals 	1.16	1.25	1.63	1.17	0.64	1.09	1.02	1.27	0.99	1.38
 Livestock 	0.06	0.03	0.01	0.02	0.02	0.03	0.03	0.06	0.08	0.10
 ETFs Fund Flows (\$ Billion) 										
 Total ETF Fund Flows (\$ Billion) 	17.78	1.20	8.73	23.48	10.67	3.31	-40.94	19.41	1.63	16.32
 Precious Metals 	20.95	4.03	8.60	22.61	-3.83	-2.45	-36.86	17.69	5.93	14.94
 Livestock 	0.04	0.00	-0.03	0.01	-0.01	-0.02	-0.04	-0.05	0.03	-0.02
 Industrial Metals 	-0.20	-0.05	0.05	0.33	-0.14	0.18	-0.17	0.26	-0.14	0.18
► Agriculture	-0.27	-0.09	0.32	0.12	-0.14	-0.21	0.03	-0.84	-0.58	-0.54
► Energy	-1.27	-2.99	-1.20	-1.97	13.94	4.17	-3.30	1.85	-2.57	-0.42
Broad Commodity	-1.48	0.30	0.99	2.39	0.85	1.64	-0.60	0.50	-1.04	2.18
DELTA WEIGHTED:										
▼ ETFs (\$ Billion AUM) (DW)										
 Total ETF Assets Under Management (\$) 	179.83	138.63	146.21	123.02	88.64	101.61	110.16	197.38	171.69	168.43
Precious Metals	153.67	111.00	140.21	91.00	62.94	77.80	85.03	166.20	142.69	131.34
Gold	141.52	102.49	101.00	82.54	55.90	67.72	74.56	153.96	129.87	117.13
 Silver 	6.73	5.01	5.74	4.50	3.10	3.67	4.83	7.40	7.90	8.10
Platinum	3.13	1.92	2.39	2.24	2.21	3.28	3.39	2.42	2.44	2.85
Palladium	1.15	0.83	1.28	1.07	1.24	2.30	1.40	1.37	1.32	2.12
Precious Metals Basket	1.03	0.68	0.73	0.61	0.43	0.70	0.75	0.99	1.14	1.15
Other	0.11	0.07	0.08	0.01	0.06	0.13	0.10	0.06	0.02	1.15
Broad Commodity	14.68	16.63	17.44	14.80	10.87	14.55	17.70	19.57	18.21	19.75
 Energy 	8.81	7.84	13.98	14.13	12.28	5.72	3.72	7.20	5.84	10.62
Agriculture	1.43	1.87	1.91	1.90	1.85	2.46	2.69	3.16	3.96	5.27
 Industrial Metals 	1.18	1.27	1.66	1.19	0.68	1.06	0.99	1.20	0.90	1.35
► Livestock	0.06	0.03	0.01	0.02	0.02	0.03	0.03	0.06	0.08	0.10
 ETFs Fund Flows (\$ Billion) (DW) 										
 Total ETF Fund Flows (\$ Billion) 	17.83	0.09	11.40	19.59	20.77	8.97	-42.11	21.45	1.49	16.50
Precious Metals	20.86	4.57	8.75	22.83	-3.35	-1.85	-36.12	18.57	5.76	14.43
Livestock	0.04	0.00	-0.03	0.01	-0.01	-0.02	-0.04	-0.05	0.03	-0.02
Industrial Metals	-0.22	-0.03	0.02	0.30	-0.04	0.20	-0.11	0.27	-0.16	0.13
► Agriculture	-0.30	-0.14	0.40	0.12	-0.10	-0.20	0.10	-0.86	-0.50	-0.59
► Energy	-0.98	-4.79	1.10	-6.06	23.41	9.20	-5.34	3.02	-2.59	0.37
Broad Commodity	-1.57	0.48	1.16	2.38	0.85	1.64	-0.60	0.50	-1.04	2.18

PERFORMANCE: Bloomberg Commodity Indices

Composite Indices

* Click hyperlinks to open in Bloomberg

		20	19								
Index Name	Ticker	Dec	YTD	1-Year	3-Year	5-Year	10-Year	20-Year	30-Year	40-Year	50-Year
Bloomberg Commodity ER	BCOM	4.90%	5.44%	5.44%	-7.57%	-22.47%	-41.89%	-12.34%	-13.16%	-41.17%	408.21%
Bloomberg Commodity TR	BCOMTR	5.04%	7.69%	7.69%	-2.79%	-18.14%	-38.41%	22.64%	99.57%	234.96%	5418.44%
Bloomberg Commodity Spot	BCOMSP	4.90%	10.37%	10.37%	6.20%	6.72%	-2.57%	223.49%	265.00%	217.44%	1912.59%
Bloomberg Roll Select	BCOMRST	5.06%	6.09%	6.09%	-2.89%	-14.84%	-28.66%	157.66%			
1 Month Forward	BCOMF1T	5.17%	8.18%	8.18%	-0.69%	-14.45%	-30.78%	111.83%			
2 Month Forward	BCOMF2T	5.36%	7.84%	7.84%	2.79%	-11.17%	-28.74%	156.43%			
3 Month Forward	BCOMF3T	5.32%	8.42%	8.42%	2.44%	-10.90%	-26.33%	167.15%			
4 Month Forward	BCOMF4T	5.31%	8.11%	8.11%	2.90%	-7.50%	-20.52%				
5 Month Forward	BCOMF5T	5.28%	8.93%	8.93%	4.61%	-5.87%	-19.57%				
6 Month Forward	BCOMF6T	5.15%	8.14%	8.14%	4.54%	-5.22%	-18.27%				
Energy	BCOMENTR	6.89%	11.78%	11.78%	-6.63%	-33.64%	-71.15%	-51.24%	5.13%		
Petroleum	BCOMPETR	9.57%	33.76%	33.76%	18.41%	-15.93%	-45.68%	70.28%			
Agriculture	BCOMAGTR	5.75%	1.72%	1.72%	-19.28%	-30.45%	-33.25%	-21.31%	-13.89%	16.26%	1473.03%
Grains	BCOMGRTR	4.63%	-1.12%	-1.12%	-17.12%	-37.15%	-37.58%	-32.63%	-43.47%	-31.22%	415.75%
Industrial Metals	BCOMINTR	3.06%	6.98%	6.98%	11.42%	-2.30%	-30.31%	97.03%			
Precious Metals	BCOMPRTR	3.88%	17.02%	17.02%	23.89%	20.13%	22.95%	321.43%	263.55%	83.36%	
Softs	BCOMSOTR	6.23%	4.26%	4.26%	-30.94%	-29.55%	-43.79%	-48.35%	-25.03%	17.68%	2966.54%
Livestock	BCOMLITR	1.55%	-5.99%	-5.99%	-1.71%	-24.72%	-16.58%	-50.52%	-27.52%		
Ex-Energy	BCOMXETR	4.25%	6.01%	6.01%	-0.54%	-11.81%	-18.69%	45.71%			
Ex-Petroleum	BCOMXPET	3.66%	1.09%	1.09%	-8.64%	-21.22%	-39.99%				
Ex-Natural Gas	BCOMXNGT	5.58%	12.16%	12.16%	3.85%	-10.79%	-22.24%				
Ex-Agriculture	BCOMXAGT	4.75%	10.28%	10.28%	4.93%	-13.30%	-42.67%				
Ex-Grains	BCOMXGRT	5.12%	9.52%	9.52%	0.49%	-13.97%	-40.33%				
Ex-Industrial Metals	BCOMXIMT	5.46%	7.74%	7.74%	-6.13%	-21.58%	-40.56%				
Ex-Precious Metals	BCOMXPMT	5.29%	5.88%	5.88%	-7.17%	-24.49%	-46.24%				
Ex-Softs	BCOMXSOT	4.95%	7.90%	7.90%	-0.55%	-17.80%	-38.77%				
Ex-Livestock	BCOMXLIT	5.27%	8.60%	8.60%	-2.99%	-17.85%	-39.73%				
Ex-Agriculture & Livestock	BCOMXALT	5.05%	11.87%	11.87%	5.28%	-12.49%	-44.96%				
Bloomberg Dollar Spot	<u>BBDXY</u>	-2.00%	-0.93%	-0.93%	-6.51%	4.75%	19.28%				
Bloomberg US Large Cap TR	<u>B500T</u>	2.94%	31.76%	31.76%	53.84%	73.90%	256.90%				
US Aggregate	LBUSTRUU	-0.07%	8.72%	8.72%	12.58%	16.20%	44.45%	166.22%	460.17%	1707.47%	
US Treasury	<u>LUATTRUU</u>	-0.56%	6.86%	6.86%	10.27%	12.35%	36.11%	146.55%	406.58%	1497.43%	
US Corporate	LUACTRUU	0.32%	14.54%	14.54%	18.83%	25.23%	71.54%	223.74%	614.04%	2302.36%	
US High Yield	LF98TRUU	2.00%	14.32%	14.32%	20.34%	34.66%	107.47%	297.45%	999.80%		

Single Commodity Indices

lundour Blowso	Tielee a	20	19								
Index Name	Ticker	Dec	YTD	1-Year	3-Year	5-Year	10-Year	20-Year	30-Year	40-Year	50-Year
Natural Gas	BCOMNGTR	-2.97%	-37.24%	-37.24%	-60.11%	-73.57%	-95.81%	-99.38%			
Low Sulfer Gas Oil	BCOMGOT	7.25%	23.99%	23.99%	31.15%	1.27%	-21.24%	222.88%			
WTI Crude	BCOMCLTR	11.05%	34.44%	34.44%	12.38%	-33.03%	-63.18%	0.86%	167.23%		
Brent Crude	BCOMCOT	10.43%	35.57%	35.57%	31.81%	-10.04%	-29.19%	242.75%			
ULS Diesel	BCOMHOTR	7.96%	24.61%	24.61%	20.79%	-7.86%	-28.35%	147.48%	259.11%		
Unleaded Gasoline	BCOMRBTR	6.13%	44.49%	44.49%	6.54%	-0.94%	-7.62%	252.09%	727.36%		
Corn	BCOMCNTR	1.84%	-5.21%	-5.21%	-20.48%	-42.03%	-44.88%	-76.47%	-84.00%	-80.93%	-34.40%
Soybeans	BCOMSYTR	7.41%	-0.57%	-0.57%	-19.35%	-20.94%	15.55%	242.11%	246.86%	289.08%	3546.60%
Wheat	BCOMWHTR	3.28%	9.36%	9.36%	-0.94%	-41.48%	-66.12%	-82.79%	-90.23%	-87.59%	-22.12%
Soybean Oil	BCOMBOTR	12.88%	19.90%	19.90%	-9.92%	-10.78%	-43.75%	2.40%	-8.20%	-3.93%	2507.76%
Soybean Meal	BCOMSMT	2.76%	-6.52%	-6.52%	-14.89%	-17.56%	87.57%	946.54%			
HRW Wheat	BCOMKWT	8.87%	-9.58%	-9.58%	-25.44%	-62.48%	-69.45%	-72.05%			
Copper	BCOMHGTR	5.24%	7.27%	7.27%	9.12%	-5.45%	-25.98%	254.25%	717.39%		
Alumnium	BCOMALTR	1.76%	-3.78%	-3.78%	4.87%	-11.31%	-46.01%	-31.97%			
Zinc	BCOMZSTR	-0.08%	-1.17%	-1.17%	0.82%	14.33%	-20.98%	39.86%			
Nickel	BCOMNITR	2.58%	32.57%	32.57%	39.19%	-10.70%	-31.55%	183.42%			
Gold	BCOMGCTR	3.56%	18.03%	18.03%	29.38%	24.24%	30.38%	366.34%	260.37%	158.34%	
Silver	BCOMSITR	4.91%	13.87%	13.87%	8.19%	7.65%	-4.99%	175.48%	182.16%	-54.75%	
Sugar	BCOMSBTR	3.85%	1.92%	1.92%	-43.78%	-34.18%	-65.41%	0.96%	14.53%	-68.93%	151.87%
Coffee	BCOMKCTR	9.09%	12.19%	12.19%	-30.74%	-53.22%	-61.20%	-91.24%	-79.51%	-72.58%	
Cotton	BCOMCTTR	5.79%	-6.46%	-6.46%	-2.42%	11.07%	29.29%	-63.13%	-40.57%	149.24%	1135.46%
Live Cattle	BCOMLCTR	-0.08%	1.18%	1.18%	13.27%	-10.13%	13.93%	4.21%	83.35%	704.76%	3670.55%
Lean Hogs	BCOMLHTR	4.91%	-19.18%	-19.18%	-26.04%	-46.94%	-53.80%	-86.04%	-87.49%		

PERFORMANCE: Bloomberg Commodity Roll Select Indices

Composite Roll Select Indices * Click hyperlinks to open in Bloomberg

Indox Nomo	Ticker	20	19								
Index Name	Ticker	Dec	YTD	1-Year	3-Year	5-Year	10-Year	20-Year	30-Year	40-Year	50-Year
BCOM Roll Select	BCOMRST	5.06%	6.09%	6.09%	-2.89%	-14.84%	-28.66%	157.66%			
Roll Select Agriculture	BCOMRAGT	5.88%	0.85%	0.85%	-16.77%	-28.15%	-23.89%	42.45%			
Roll Select Ex-Ags & Livestock	BBURXALT	5.00%	10.02%	10.02%	4.72%	-6.87%	-34.79%				
Roll Select Grains	BCOMRGRT	4.81%	-1.93%	-1.93%	-13.83%	-33.64%	-30.20%	28.41%			
Roll Select Softs	BCOMRSOT	6.33%	2.04%	2.04%	-32.99%	-32.98%	-33.82%	-9.86%			
Roll Select Livestock	BCOMRLIT	1.81%	-8.92%	-8.92%	-10.41%	-37.48%	-15.37%	33.89%			
Roll Select Energy	BCOMRENT	6.78%	8.50%	8.50%	-6.63%	-22.61%	-58.77%	96.15%			
Roll Select Ex-Energy	BCOMRXET	4.33%	5.16%	5.16%	-0.47%	-11.95%	-12.80%	139.89%			
Roll Select Petroleum	BCOMRPET	9.04%	28.33%	28.33%	17.12%	-4.38%	-27.85%	385.04%			
Roll Select Industrial Metals	BCOMRINT	3.04%	6.12%	6.12%	10.13%	-2.80%	-27.50%	185.10%			
Roll Select Precious Metals	BCOMRPRT	3.92%	17.16%	17.16%	24.10%	20.76%	24.22%	337.59%			

Single Commodity Roll Select Indices

		20	19								
Index Name	Ticker	Dec	YTD	1-Year	3-Year	5-Year	10-Year	20-Year	30-Year	40-Year	50-Year
Natural Gas RS	BCOMRNGT	-1.68%	-36.46%	-36.46%	-56.03%	-64.58%	-91.44%	-90.31%			
Low Sulfer Gas Oil RS	BCOMRGOT	7.07%	20.10%	20.10%	24.04%	-0.68%	-22.04%	257.39%			
WTI Crude RS	BCOMRCLT	9.59%	30.23%	30.23%	13.59%	-9.75%	-37.64%	356.38%			
Brent Crude RS	BCOMRCOT	10.43%	29.84%	29.84%	28.18%	-4.26%	-20.43%	441.09%			
ULS Diesel RS	BCOMRHOT	7.99%	21.78%	21.78%	11.11%	-9.05%	-31.41%	301.84%			
Unleaded Gasoline RS	BCOMRRBT	6.39%	33.62%	33.62%	13.47%	12.73%	9.03%	475.69%			
Corn RS	BCOMRCNT	2.90%	-6.30%	-6.30%	-17.61%	-38.33%	-39.90%	-56.28%			
Soybeans RS	BCOMRSYT	6.84%	1.43%	1.43%	-8.78%	-8.81%	42.60%	419.04%			
Wheat RS	BCOMRWHT	3.28%	4.91%	4.91%	-8.00%	-46.79%	-64.77%	-45.86%			
Soybean Oil RS	BCOMRBOT	12.86%	19.62%	19.62%	-10.51%	-10.17%	-38.29%	47.78%			
Soybean Meal RS	BCOMRSMT	2.82%	-5.36%	-5.36%	-3.90%	-9.88%	115.68%	1391.06%			
HRW Wheat RS	BCOMRKWT	8.38%	-14.20%	-14.20%	-27.41%	-62.11%	-67.27%	-36.86%			
Copper RS	BCOMRHGT	5.22%	7.12%	7.12%	9.65%	-5.41%	-23.56%	394.78%			
Alumnium RS	BCOMRALT	1.66%	-5.27%	-5.27%	1.17%	-12.49%	-43.32%	-2.52%			
Zinc RS	BCOMRZST	-0.08%	-3.00%	-3.00%	-2.08%	11.35%	-18.76%	113.11%			
Nickel RS	BCOMRNIT	2.65%	32.21%	32.21%	39.23%	-9.85%	-27.95%	344.42%			
Gold RS	BCOMRGCT	3.65%	18.21%	18.21%	29.64%	25.03%	31.36%	371.70%			
Silver RS	BCOMRSIT	4.82%	13.87%	13.87%	8.31%	7.97%	-3.01%	207.92%			
Sugar RS	BCOMRSBT	4.47%	-1.04%	-1.04%	-48.34%	-42.05%	-59.54%	103.08%			
Coffee RS	BCOMRKCT	8.59%	9.49%	9.49%	-32.02%	-53.01%	-57.18%	-85.80%			
Cotton RS	BCOMRCTT	5.77%	-6.37%	-6.37%	1.84%	15.51%	58.57%	-39.71%			
Live Cattle RS	BCOMRLCT	1.14%	-4.05%	-4.05%	4.73%	-18.99%	10.59%	62.93%			
Lean Hogs RS	BCOMRLHT	2.84%	-16.24%	-16.24%	-33.42%	-60.24%	-49.06%	-20.89%			

BCOM Constituent Weights BCOM Index MEMB <GO>

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Group	Commodity	Ticker	Dec 2019 Contrib to Return %	Dec 31 2019 Weight %	Nov 29 2019 Weight %		Dec 2019 Weight% Change	2020 Target Weight
	Natural Gas	NG	-0.19	5.81	6.44	•	(0.63)	7.96%
	Low Sulfer Gas Oil	QS	0.19	2.74	2.69	T	0.05	2.60%
	WTI Crude	<u>CL</u>	0.92	8.85	8.42		0.42	7.99%
Energy	Brent Crude	<u>CO</u>	0.77	7.84	7.46		0.38	7.01%
	ULS Diesel	HO	0.17	2.28	2.23	1	0.05	2.11%
	Gasoline	XB	0.16	2.68	2.62	\mathbf{T}	0.05	2.26%
	Subtotal		2.03	30.20	29.87		0.33	29.93%
	Corn	<u>C</u>	0.10	5.55	5.72	•	(0.17)	5.83%
	Soybeans	<u>s</u>	0.41	5.78	5.56	1	0.22	5.64%
	Wheat	W	0.10	3.15	3.20	•	(0.05)	3.04%
Grains	Soybean Oil	BO	0.41	3.51	3.24		0.27	2.90%
	Soybean Meal	<u>SM</u>	0.08	3.02	3.05	•	(0.03)	3.30%
	HRW Wheat	KW	0.09	1.16	1.12	1	0.04	1.49%
	Subtotal		1.18	22.17	21.90		0.27	22.19%
	Copper	<u>HG</u>	0.37	7.20	7.19		0.01	6.96%
Industrial	Aluminum	LA	0.06	3.93	4.02	4	(0.09)	4.33%
	Zinc	<u>LX</u>	-0.01	2.70	2.85	4	(0.15)	3.43%
Metals	Nickel	LN	0.08	3.17	3.23	4	(0.07)	2.75%
	Subtotal		0.51	17.00	17.28	-	(0.28)	17.46%
Precious	Gold	GC	0.46	13.41	13.61	4	(0.19)	13.62%
	Silver	<u>SI</u>	0.19	4.10	4.11	•	(0.01)	3.78%
Metals	Subtotal		0.65	17.52	17.72	4	(0.20)	17.40%
	Sugar	<u>SB</u>	0.12	3.10	3.13	•	(0.04)	3.01%
Softs	Coffee	KC	0.26	2.90	2.79	\mathbf{T}	0.11	2.71%
SUITS	Cotton	<u>CT</u>	0.07	1.25	1.24		0.01	1.49%
	Subtotal		0.44	7.25	7.17	$\mathbf{\hat{T}}$	0.08	7.21%
	Live Cattle	LC	-0.01	3.88	4.08	•	(0.20)	4.02%
Livestock	Lean Hogs	LH	0.09	1.98	1.98	V	(0.00)	1.78%
	Subtotal		0.08	5.86	6.06	-	(0.20)	5.80%
Total			4.90	100.00	100.00			100.00%

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Crude Oil Production: BI OILS <GO>

	Dashboard (BI OILSN)						America
nalysis	51) Macro 52) OPEC 53) Baker Hughes		itocks 55) IEA Dem. D		IEA Supp./De	m. 🔪
	View 12 Ann 💌 Growith None				USD USD	 Zoom 	10
			2015	2014	2013	2012	201
Industry	IEA World Crude Oil Demand and Supply						
	Demand (MMBPD)						
ata Library	CECD	_	45.6	45.6	46.1	45.9	46.4
	Americas		24.2	24.1	24.1		24.
	United States	~	19.2	19.0	18.8	18.7	18.
Market Share	Canada		2.4	2.4	2.4	2.4	
Macro	Chile	<u>^</u>			0.3	0.3	
	Mexico		2.0	2.0		2.1	
	Europe	\sim	13.4	13.5		13.8	
	Pacific	\sim		8.1			
Valuation							
Credit	Non-OECD		47.9	46.9	45.7	44.6	43.
Pricing		~					
	Europe						
Contributors	Other Asia						
lonitor		<u></u>					
	Middle East						
Comp Sheets							
	Total World Crude Oil Demand	~					

Precious Metal Mining: BI PMET <GO>

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Precious Metal Minin	g Dashboard (BI PMETG)	Global
Analysis	Industry Outlook (Click to see more) »	Key Indicators Lates
Dashbd Home	China, South Africa Rule Precious Metals Markets: 2015	Industry Indicators
		👔 Avg Gold Spot Price (🦯 1.22
	companies that mine it, after their shares fell more than 🛛 🏄 🏷	Known ETF Gold Holdi 🦯 52.12
	12% in 2014. China, the largest gold consumer, may	III INF Global Gold Reser V 1.03
Data Library		 Dperating Stats (Median)
Featured	< Page 1 of 15 >	3 X Sales Growth Yoy (%) -8.
Market Share		I EBITDA Margin (%) 70.0
	Critical Themes	If T12M Sales Growth (%) .
	1) The Natural Resources London Forum Keynote Speech	Il Return on Equity (%) 2.5
	2) Precious Metals Outlook Book	Equity Valuation (Median)
	3) Why Private Equity May Take Over Mining	I Est P/E Current Yr 61.3
	4) Mongolia Mining Overview	J Price/Book 1.4
	Most Recent (Click to see more) » Analysis &	Data
	Norilsk Expects Three Years of Rising Palladium, Platinum Demand	15147 Competitors WTD
Contributors	Norilsk Sees 2015 Deficit in Nickel, Platinum, Palladium: Review	04:35 📲 🗐 Tanzanian Royalty Ex 🍡 -38.:
Monitor	II Copper Supply to Slow as Antofagasta Remains Upbeat on Long-Term	03:01 🛛 🛛 Sandstorm Gold Ltd 🛛 🔨 🔹 10.4
	Antofagasta Targets 28% Copper Production Acceleration to 2018	02:35 👔 🗐 Franco-Nevada Corp 🗛 🐽
	9 Meak Peso Helps Counter Rising Antofagasta Copper Net Cash Costs	02:09 📩 🧏 Royal Gold Inc 🛛 🐴 +6.:
Comp Sheets	 Net Cash Down 79% as Antofagasta Invests in Copper Mining, Cycle 	03/31 📑 Silver Wheaton Corp 🔨 +5.1
Markets	 Polyus Gold Is Top Russian Producer With Ample Reserves: Outlook 	03/31
	Polyus Sales to Flourish as Gold Volumes Reach New High: Outlook	03/31
	1 Record Dutput at Polyus Gold on Improved Recovery Rates	03/31
	2 Earnings May Improve for Polyus on Volumes, Lower Costs: Outlook	03/31
	A Lower Costs, Weak Ruble May Boost Polyus Gold Margin: Outlook	03/31
	It Chinese Gold Producers' Profits Fall on 10% Metal-Price Decline	03/30 👻

Copper: BI COPP <GO>

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opper Dashboard (B	BI COPPG)	Global
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Dashbd Home	Copper Markets Turn to China, New Mines for Key to	Industry Indicators
Companies	After a year of falling copper prices and even steeper	11 China GDP Yoy (%) (C 📉 7.
	declines in mining shares, China and new mine supply 🔬 Ma	201.1 YTD Copper Surplus/- 🚧 201.1
Credit	will hold the key to 2015 results. Key will be Chinese	Statement Major Exch Copper Inv 4 599.9
	demand growth, continued buying by the Chinese State	Operating Stats (Median)
Litigation	< Page 1 of 15 >	Il Sales Growth Yoy (%) -1.
ata Library		IJ EBITDA Margin (%) 26.
Featured	Critical Themes	Jij T12M Sales Growth (%) -2
Market Share	1) China Insight: Bloomberg Intelligence on the Ground	I Return on Equity (%) 2.
Macro	 New Copper Supply: What happened to the Surplus? 	Equity Valuation (Median)
Industry		is & Data 🗾 🛛 Est P/E Current Yr 17
Company	I Norilsk Sees 2015 Deficit in Nickel, Platinum, Palladium: Review	04:35 M Price/Book 1
	Copper Supply to Slow as Antofagasta Remains Upbeat on Long-Term	03:01
	Antofagasta Targets 28% Copper Production Acceleration to 2018	02:35 Competitors NYTD
	d Weak Peso Helps Counter Rising Antofagasta Copper Net Cash Costs	02:09 MMC Noritsk Nicket 03 🧨 +26
	I Largest China Copper Refinery Fuels Jiangxi Sales Boom: Outlook	04/01 : Barrick Gold Corp // +21
Contributors	8 Overseas Mines May Help Jiangxi Copper Lock in Refining: Outlook	04/01 🛛 Vale SA 📉 -19
onitor	9 Traders Build Copper Bets as Tighter Market Looms After Flooding	04/01 🕺 Freeport-McMoRan In 🗽 -18
News/Researc	 Copper Markets Turn to China, New Mines for Key to 2015 Results 	03/31 📓 Anglo American PLC 🗸 -16
Events	11 Net Cash Down 79% as Antofagasta Invests in Copper Mining, Cycle	03/31 🔰 51 Rio Tinto PLC 🛛 🔨 -8
Comp Sheets	2 Antofagasta Margin May Drop to 13-Year Low on Pricing: Outlook	03/31 Si Glencore PLC VI -6
Markets	Antofagasta Remains Committed to Dividend, Output Growth Plans	03/31 🛛 🖞 Grupo Mexico SAB de 🚀 🛛 +4
	Antofagasta Revenue, Earnings Skewed to Copper and Asia: Outlook	03/31 🛐 BHP Billiton Ltd 🏼 🏑 +2
	Antofagasta 2015 Earnings May Fall on Weak Metal Prices: Outlook	03/31 🔄 d Southern Copper Corp 🖍 🛛 +2.
	10 China Copper Refiner Fees Drop 5% on Clean-Concentrate Shortage	03/31 🝸

Natural Gas Production: BI NGAS <GO>

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Natural Gas Produc	tion Dashboard (BI NGASN)				N	orth America 🏠
Analysis	51) Inventories 52 NGL 53 LCI Data	54 LNG 55 LN	IG T'put	50 LNG Cap		
Dashbd Home	70 Latest 70 Week-by-Week Storage 73 Hi					
Companies				Curr I	ISD Z	
Industry		Current	Prev Veek	1 Week Net	1 Week & Cha	Prev Year 1
Credit				Chg		
Government	Natural Gas Inventories					
	-					
Data Library	US Working Storage (BCF)					
	East	559.00	581.00	-22.00		356.00 57.0
	West	344.00	338.00	6.00		164.00 109.
	Producing	576.00	548.00	28.00		376.00 53.1
Industry						
Company	🖃 Total			12.00		896.00 65.0
	Net Injections/Withdrawals		-45.00	57.00	126.67	-57.00 121.
	Consensus (Bloomberg Survey)	1,474.00	1,463.00	11.00	0.75	901.00 63.6
	Canada Working Storage (BCF)					
Shale Plays	West	218.76	218.77	-0.01	-0.00	113.73 92.3
Contributors	East Total	48.53	49.52	-0.98	-1.99	22.76 113.
Monitor	Source: Canadian Enerdata			-0.99		136.49 95.8
News/Researc	Source: Canadian Enerdata					
Events						
Comp Sheets						
Markets						
	3) Notes Available					

Agricultural Chemicals: BI AGCH <GO>

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Agricultural Chemica	Ls Dashboard (BI AGCHG)				
Analysis	Industry Outlook (Click to see more) =		Key Indicators		Litest
Dashbd Home	Ag-Chem Companies Adjust to Lower Crops, 00: 2015		Industry Indicators		
Companies	With crop prices down 7% this year and input costs up,	water wants	Apricultural Price Ind	2	1.250
Industry	farmers are focused on efficiency entering 2015.		10.5 Farm Net Cash In		07.40
Credit	Agricultural chemical sales could be challenged by a	*****	BUS. Com Price Future		380.60
	drop in corn prices and reduction in planted acres of		Operating State (Redian)		
Litigation	Page 1 of 18	-) Sales Growth Yoy (4)		3.62
Data Library			N EDUTOR Marcin (N)		19-70
Featured	Critical Themes		MEPS Growth Yoy (%)		111 17
Market Sharn	1) Policy in the U.S., China and India Shifts Agchems		11 B005 (%)		7.81
	2) Big Data Disrupts AgChems as Ag Analytics Spread		Eguity Valuation (Median)		
Industry	3) Potash Supply Growth Slows, Focus Shifts to Marketin		B Est P/E Current Yr		15.40
Company	 New Opportunities for Ag Chem as Nature Adapts 		M Price/Sales Ratio		- im
Earnings	Most Recent (Click to see more) - Entityste	BData			
Valuation	5) Free Cash Flow at Intrepid Up as Capex Falls to Sustaining Lev		Competitors	SYTE	
Credit	Trio Diversifies Intrepid's Fertilizer Customer and Crop Base	03/27	2 Vara International AS	100	20150
Fert Margins	3) Diverse End Harkets Allow Intrepid Potash to Optimize Hargins	03/27	St Unablats P350	1	-18.91
Fert/Ag Prices	5) Intropid Revitalized Underutilized Potash Hines in Western U.S.	03/27	& Aprium Stic	1	411 05
	1) Freight Costs, Product Mix Help Boost Realized Price at Intropie	03/27	91 Petash Corp of Saskat	2	7.46
Monitor	39 Intreptd Revives Old Potash Mines to Become U.S. Leader: Outle	ook 03/26	El Syngenta AG		14.60
News/Researc	1) Intreptd Is No. 4 in North America Potash Market, with 8% Share	03/26	M Saudi Arabian Fertilite		11.50
	2 Rising Volume and Price Support Intrepid Ebitda Growth: Outloo		Il Nonsanto Co	2	-3:50
Comp Sheets	11 Syngenta Suits May Complicate New Seed Release: Litigation W		CF Industries Holding	105	+2.64
Markets	10 Intrepid Potash Pairs Revenue Growth With Volatility: Outlook	03/26	Israel Cherwicals (td	-	+1.49
	5) Syngenta GHO Corn Suits Are Unlikely to Settle: Litigation Wate		d Horaic Co/The		+22
	10 Sunnenta May Have Farly Edge in GMD Corn Suffs: Litination Wal	leh 03/35 -			

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Dashbd Home	China Shapes Global Aluminum Markets as	Industry Indicators
Companies	Global aluminum markets are being	1 China Industrial Prod 🔥 7.
	increasingly driven by Chinese producers,	🔢 🛛 🖉 Global Primary Alumi 🦯 🛛 4.2
Data Library	which plan to add more capacity this year than	
Featured	the rest of the world combined. The industry	Operating Stats (Median)
Market Share	< Page 1 of 15 >	3 Sales Growth Yoy (%) 2.
		I EBITDA Margin (%) 8
	Critical Themes	H T12M Sales Growth (%) 1
Company	1) Auto Sheds Weight with More Aluminum	I Return on Equity (%) 4
Earnings	2) Key Themes in Global Aluminum Industry	Equity Valuation (Median)
	3) Asian Metals Roadshow	Est P/E Current Yr 15
Cost Analysis	 Capacity Additions and Cuts for Aluminum and Alumina 	H Price/Book 1
Downstream	Most Recent (Click to see more) » Analysis & Da	ata 🔹
	5) Aluminum Stocks Ride Out Metal Fall on Cost Cuts, U.S. Outlook	02:30 Competitors %TD
Monitor	6) AWAC Shifts to Alumina Price Indices From Aluminum Benchmarking	02:02 🛛 🛛 Yunnan Aluminium Co 📝 +71
	1) Alumina Ltd. Earnings Swing With Alumina Prices, AWAC: Outlook	01:36 🛛 🛛 Aluar Aluminio Argent 📝 +39.
	8) Yunnan Aluminium Surges on Power Costs; Xinjiang Joinworld Jumps	s 01:33 : 🛛 Shandong Nanshan Al 🏹 +27.
Comp Sheets	 Alumina Ltd. Falls to Loss on AWAC Restructuring: 2014 Review 	01:10 🍍 9 Jisozuo Vanfang Alum 🖌 +25.
Markets	II) Alumina Ltd. Is Only Pure-Play Investment in Bauxite: Outlook	04/01 🖫 Alcoa Inc 🔨 -17.
	1) China Turns to Australia, Malaysia After Indonesia's Bauxite Ban	03/31 🚽 Si Aluminum Corp of Chi 📈 +16.
	2) Increasing Chinese Aluminum Exports Pressure Overseas Premiums	
	1) China Hongqiao's Margin Dwarfs Chalco on Inhouse Power Supplies	03/30 📓 Alumina Ltd 🌱 -12.
	19) China Refineries Invest Overseas on Indonesia Bauxite-Export Ban	03/30 🛛 🛿 United Co RUSAL PLC 🔨 -6
	5) Chalco Incurs Losses on Aluminum Price Decline: 2014 Review	03/30 🔄 di Norsk Hydro ASA 🛛 🕂 🔸
	16) Metal Miners Report Unit-Production Costs in Three Tiers: Primer	03/26 🔽

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Commodity options monitor	OMON
Commodities charts	COSY
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US exchange traded product fund flows	ETF

Commodity Indices

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Index constituent weights	BCOM Index MEMB
Listed index futures	BCOM Index CT
Option volatility surface	BCOM Index OVDV
Seasonality chart	BCOMNG Index SEAG
Commodity index futures movers	FMV
Commodity index ranked returns	CRR

Weather

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US snow monitor	SNOW	
EU weather & utility models	EUMM	

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Top oil news	OTOP
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First Word oil	NI BFWOIL
News on oil inventories	TNI OIL INV
Oil Buyer's Guide newsletter	NI OBGBRIEF
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Oil market analysis	BOIL
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OPEC production and prices	OPEC
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Refinery outages	<u>REFO</u>
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Top metal news	<u>METT</u>
Precious metal dashboard	BI PMETG
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Agriculture

Top agriculture news	<u>YTOP</u>
Agriculture calendar	AGRI
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Agriculture supply & demand	AGSD
Crop calendar	<u>CCAL</u>

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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