Tables & Charts – March 2017 Edition

Back to Square One in 1Q 2Q Should Set Commodities Tone

- Broad commodities appear poised for recovery once energy stabilizes
- Down 2.3% total return and flat on a spot basis, commodities mark time in 1Q
- Mean reversion weakness in energy and the dollar were predominant offsetting forces
- Ags decline on South American bean harvest, potentially in a favorable position for the North
- Metals, primary beneficiaries of the weaker dollar, lead all sectors with precious taking the gold
- Declining crude and copper vs. gold indicate Fed tightening expectations my be too aggressive

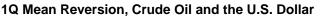
Mike McGlone - BI Senior Analyst; Commodities. BI COMD (the commodity dashboard)

1Q a Push, Commodities Welcome 2Q With Energy Risks Predominant

Performance: March -2.7%, YTD -2.3, Spot -0.3%. (returns are total return (TR) unless noted)

Broad commodities, pressured in 1Q by mean-reversion weakness in energy yet supported by the same in the U.S. dollar, will likely be about which, if either, of these dominant factors becomes a new trend for the rest of 2017. Unchanged on a spot basis and with a minus 2.3% total return in 1Q, the Bloomberg Commodity Index reflects a market in transition. If energy stabilizes along with a potential dollar peak, supply and demand trends favor further appreciation in broad commodities.

Metals should remain the shining stars with favorable fundamentals. Precious metals performance surpassing industrials is a potential macroeconomic concern. Agriculture remains a weather blip away from recovery. Record demand, due to lower prices and multiyear bumper crops, is due for normalization.





MACRO OUTLOOK

Dollar, Crude Oil Mean Business, Should Set 2017 Commodity Tone. Back at their 52-week averages, the U.S. dollar and crude oil may be the primary commodity drivers for the rest of 2017. If the current Federal Reserve rate-tightening cycle continues, commodities could be a leading asset class. The markets with the highest and lowest correlation to broad commodities, crude oil is up 35% this cycle vs. a 0.5% decline in the Bloomberg Dollar Spot Index. If this favorable scenario continues, the BCOM total return of 10.6% is more likely to catch up to its 24.3% spot gain.

Market Commentary

DATA

Overview, Commodity TR,

Contango/Backwardation,

Open Interest, Volume,

Energy

Metals

Agriculture

PERFORMANCE:

Prices, Volatility
CURVE ANALYSIS:

Roll Yields, Forwards/Forecasts MARKET FLOWS:

COT, ETFs

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8

13

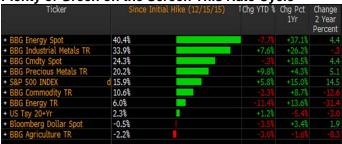
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21

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On a spot basis, commodities are leading most assets, endorsing higher interest rates. High negative roll yields are declining following flattening futures curves. As crude oil seems confined to \$45-\$53 a barrel, sustaining the recent lower-dollar trend could be a primary support.

Plenty of Green on the Screen This Rate Cycle



If This Is What Fed Tightening Brings, How About Some More? The advent of the current higher interestrate cycle appears to be what was needed to breathe life into the long-suffering commodities market. If so, commodities may perform better if the tightening pace accelerates. That's unlikely, as increasing commodity prices are providing support for higher rates, not the other way around. An issue has been total returns relative to spot, notably in energy. Leading all sectors, up 40.4%

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since the initial rate increase, energy spot far exceeds the 6.0% total return.

That's changing with flattening futures curves, but the crude-oil rally appears to have stopped. If so, it would indicate reduced tightening expectations. Industrial metals, historically the best higher-rate companion sector, might have to become the performance leader to support further rate increases.

Fed May Be One-and-Done in 2017 if These Recent Trends are Sustained. Unless things are very different this time, declining crude oil prices, bond yields and copper vs. gold aren't consistent with further interest-rate increases. If history is a guide, expectations for higher rates may be too aggressive unless these Federal Reserve tightening companions reverse higher. There may be parallels to failed aggressively higher rate expectations at the end of 2015. Despite similar trends in 4Q15, fed funds futures priced for an end-of-2016 level of 1.18%, yet ended at 0.65%.

Crude Oil, Bond Yields, Copper/Gold Turning Down



Increasing bond yields, crude oil and copper vs. gold are among the most consistent companions to past tightening cycles. Similar to the end of 2015, they've begun to decline. At the end of 2015, when some analysts were predicting four rate hikes in 2016, these indicators said no-go.

Best Over for the Dollar Should Support the Case for Commodities. Despite continued tightening, the U.S. dollar is looking toppish, which is supportive of commodities. The dollar rally appears to have run its course if history is a guide. In the three tightening cycles since 1991, the U.S. Dollar Spot index fell an average of 2.5%. As of March 31, in the current higher-rate cycle, the Bloomberg Dollar Spot index is down 0.5%. Buy the rumor, sell the fact appears at play. The dollar rallied 21% during the two year run-up to the Federal Reserve's initial rate hike in December 2015.

U.S. Dollar Turns Down Despite Tightening



In the same period, the Bloomberg Commodity Index total return was minus 39%. So far in this higher-rate cycle, it's up 10.6%. Dollar watchers might be asking what it's going to take for the dollar to rally as it weakens with the U.S. tightening while most of the rest of the world is doing the opposite.

Commodities on Board With Reflation, But May Switch to Driver. When the energy market stops being a drag, the path of least resistance for broader commodities should be higher. Absent continued commodity strength, global reflation is an oxymoron, making further rate hikes unlikely. Uniquely, commodities -- notably metals -- may be primary beneficiaries if Federal Reserve tightening expectations are reduced, as the dollar would be more likely to accelerate its 2017 downward trend. The Fed funds rate may be stalled at the current 1%, the level at the start of the last cycle.

BCOM Spot Index and Fed Funds on Upward Path



The BCOM Spot index needs to rally about 5% to take out the high since 2014 at 347. If it does absent a weak stock market, the next rate hike should be a matter of time. A key issue would be if commodities rally and stocks fall. If they both decline, rate-hike expectations should reverse.

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Spot Commodities in the Lead, Total Returns Likely to Follow. Commodities are doing what they have historically in tightening cycles -- outperforming stocks on a spot basis -- and total returns are likely to catch up. Since the inception of the current rate-hike cycle, the spot Bloomberg Commodity Index (BCOM) is up 24.3% vs. an 19.2% total return for the S&P 500. BCOM's total return, at 10.6%, has room for further appreciation if history is a guide. During the past three tightening cycles since 1990, the BCOM total return exceeded the S&P by 2.6 times.

Stocks, Bonds, Commodities Since First Rate Hike



Typically, years with high negative roll yields coincide with sharp spot gains, followed by positive years. In 2009, the highest roll yield ever was minus 22.3%. In 2010, the BCOM total return was 16.8%. The second-highest negative-roll-yield year was 2006 at minus 13%. The 2007 total return was 16%.

SECTOR PERFORMANCE

Energy Sprint Failing as Metals on Stride to Win the Marathon. The 11.4% mean-reverting decline in 1Q after 4Q's 10.6% gain in the Bloomberg Energy Subindex appears to be on the path of least resistance in a sector burdened by increasing supply exceeding demand. The 1Q outperformance of the primary finite-supply commodities that can't be grown -- metals -- compared with those that can (agriculture and energy) appeared to exemplify the paradigm shift in commodities. Metals have the added benefit of being easy to store and not subject to high negative roll yields.

Metals Take Back Leader Role From Energy

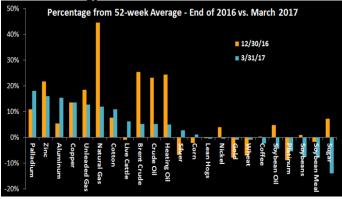
Chg YTD %	Chg March	Chg 6M Pct	1Yr % Chg	2Yr % Chg
+9.8%			+4.3%	5.1%
+7.6%		+14.2%	+26.2%	
+.1%	+.2%	+21.0%	-6.6%	-15.0%
-1.4%	-5.2%		-7.3%	-18.6%
-3.0%	-5.8%	-5.0%	-1.6%	-8.3%
-4.8%	-6.2%	-15.5%	+8.7%	12.5%
-11.4%	-1.5%		+13.6%	
	+9.8% +7.6% +.1% -1.4% -3.0% -4.8%	March +9.8\$ -6.8\$ -7.6\$ -2.0\$ +1.2\$ +2.2\$ -1.4\$ -5.2\$ -3.0\$ -5.8\$ -4.8\$ -6.2\$	March Pct +9.8\$ -6.6\$ -5.7\$ +7.6\$ -2.0\$ +14.2\$ +1.\$ +2.\$ +21.0\$ -1.4\$ -5.2\$ 3.0\$ -5.8\$ -5.0\$ -4.8\$ -6.2\$ -15.5\$	March Pct Chg +9.8\$ -6.6\$ -5.7\$ +4.3\$ +7.6\$ -2.0\$ +14.2\$ +26.2\$ +1.\$ +2.\$ +21.0\$ -6.6\$ -1.4\$ -5.2\$ -7.3\$ -3.0\$ -5.8\$ -5.0\$ -1.6\$ -4.8\$ -6.2\$ -15.5\$ +8.7\$

If the dollar has peaked, precious and industrial metals should remain top performers. Sugar's retreat after its 2016 rally was a primary drag on soft commodities and, thus, agriculture in 1Q. South America's soybean harvest pressured the grains in March, historically a weak month.

HOT-COLD OUTLOOK

Metals Gaining Momentum at Expense of Energy; Soybeans Look Rip. Commodity momentum shifting in favor of metals and away from energy and agriculture may offer opportunity. Compared with the overly optimistic energy outlook at the end of 2016, when its components were well in excess of 20% above their 52-week moving averages, metals are the leaders at the end of 1Q. Yet such extremes have been reduced. Zinc and sugar mark the rich and cheap bookends that may warrant a response, but the standout appears to be harvest-pressured soybeans.

Positive Energy Shifts to Metals



South America's harvest and the March 31 USDA annual prospective plantings report indicating increased planting have pressured soybean prices ahead of the predominant price-moving factor -- the U.S. growing season. For the past 10 years, April has been the best month in the Bloomberg Soybeans Subindex, averaging a 4.4% gain. Soybean prices at the end of 1Q could be ripe for the picking.

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ATTRIBUTION

BCOM Returns in 2017: Metals Offset Energy,
Agriculture Losses. Stalwart metals kept the
Bloomberg Commodity Index spot change about flat in
1Q and minimized the total-return decline that's been
pressured by energy. The 11.4% retreat in the
Bloomberg Energy Subindex was the heaviest drag on
the broader index's total return, subtracting about 400
bps. Agriculture was next, at about minus 110 bps.
Metals combined to add about 270 bps after total returns
of 9.8% for the Bloomberg Precious Metals Subindex
and 7.6% for the industrials subindex.

Metals the Only Positive Contributors in 1Q



Natural gas was the largest component drag on total returns, subtracting 170 bps as the subindex declined 17.0%. Gold, the largest BCOM weighting (11.6% at 1Q's end), contributed the most, adding 80 bps to total returns, just behind a 70-bp boost from aluminum.

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Energy (Index weight: 30.4% of BCOM. Performance: March -1.5%, YTD -11.4, Spot -7.7%) *Note index weights are the YTD average

Extended Prices, Positions Weigh on Energy

In Crude Oil, the Trend Could Be Range Traders' Friend. Mean-reverting natural gas sparked the 11.4% Bloomberg Energy Subindex 1Q decline, indicating that the prime opportunities should remain with responsive range traders. If crude oil prices increase, North American supply is likely to ramp up. If prices decline, OPEC is apt to cut supply. The current situation is increasingly negative for prices, as North American liquid-fuel production is set to accelerate, supported by the Trump administration. Lower prices may be the only force that can close the spigot.

The average of energy components' one-year futures curves ended 1Q at 0.2% in backwardation vs. 17% a year ago -- a positive for investors. Total returns should narrow closer to spot. The negative is that front WTI crude oil prices are likely confined to \$45-\$53 a barrel for an extended period.

PERFORMANCE DRIVERS

Crude Oil Playing Some Catch-Me-If-You-Can With Natural Gas. Energy continues to churn within a narrowing range, which could indicate a market at risk of decline. Natural gas led 1Q decliners, off 17%, though cushioned by about an 11.2% gain in March that passed the decline baton to petroleum. Crude oil simply reverted much of the OPEC-cut rally as North America ramps up production. WTI crude, the benchmark of U.S. liquid fuel and the leading decliner (7.0%) in March, reflects excess inventories and increasing supply.

Natural Gas Leads Energy Decliners in 1Q

			-		
Security	Chg YTD %	Chg	Chg 6M	1Yr %	2Yr %
		March	Pct	Chg	Chg
Bloomberg Brent Crude Subindex	-7.7%	-5.6%	7%	+16.1%	-30.6%
Bloomberg WTI Crude Oil Subind	-9.0%	-7.0%	-2.5%	+10.1%	-36.3%
Bloomberg Heating Oil Subindex	-10.3%	-4.5%	-2.2%	+19.0%	-28.4%
Bloomberg Energy Subindex Tota	-11.4%	-1.5%	-2.0%	+13.6%	
Bloomberg Unleaded Gasoline Su	-12.2%	-2.9%		+5.9%	-19.2%
Bloomberg Natural Gas Subindex	-17.0%	+11.2%	-3.0%	+17.0%	-38.2%

A key factor that's set to improve in energy is the high negative roll yield, 23% at the end of March, reflecting the past year when the one-year curve was 17% in contango vs. 0.2% backwardation now. On a front-futures basis,

unleaded gas ended 1Q unchanged with futures shifting to the summer blend.

PRICE – OUTLOOK

Still Vulnerable, Crude Oil Cage Narrows to \$45-\$53 a Barrel. Appearing at greater risk of revisiting the lower end of a narrowing crude oil range at \$45 a barrel, the path of least resistance appears downward. Crude traded about \$45 prior to the OPEC-cut announcement on Nov. 30. The 2017 mean until the 3% plunge on March 8 was \$53. Ending 1Q just above \$50, oil prices await the next catalyst. Absent further OPEC cuts, excess inventories are unlikely to decline, which will continue to pressure prices. The 52-week average near \$48 may provide an initial price-pivot indication.

The front future hasn't ended a week below its 52-week mean in about a year. Currently trending up, WTI has returned to this mean. Crude needs to hold above \$53 to indicate further strength. Sustaining below \$45 would denote a failure of OPEC to prop up the market and risk revisiting the \$30 handle.

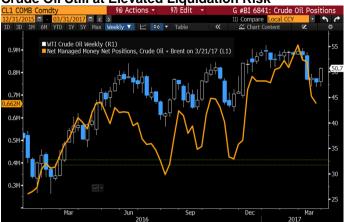
Still Elevated, Crude Oil Positions May Have to Decline Further. With liquidation underway in energy from recent record long positions, further price declines may occur. If the 2016 recovery is a guide, combined Brent and WTI crude oil managed-money net positions would have to decline by about another third to reach similar levels that marked their lows. Last year was a bounce from a multiyear historic decline. It warranted excess recovery-based positions, but as the reality of a range trade sets in, liquidation risks remain elevated.

Record gold, silver and sugar net-long positions proved futile in 2016, but are much more neutral after sharp price corrections that offer better relative risk-to-reward for longs. Energy may have to await a similar liquidation-driven correction before a favorable risk scenario

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supports longs.

Crude Oil Still at Elevated Liquidation Risk



Natural Gas May Be the Canary in the Coal Mine for Crude Oil. Natural gas has been one of the biggest commodity duds of 2017, and crude oil may be following in its footsteps. Closely linked before the proliferation of hydraulic fracturing boosted U.S. natural-gas production beginning about a decade ago, rapidly advancing technology is doing to WTI crude oil what it did to gas. Natural gas, which is more advanced in adjusting to lower prices via sharply growing heating, electricity and export demand, may be more of a leading indicator for WTI crude.

Crude Oil Appears to Be Following Path of Gas



The failed end of 2016's gas rally to \$4 per MMBtu set the stage for energy to correct in 2017. More subject to weather, high-volatility natural gas at \$3.2 is at about the midpoint of its primary \$2-\$4 range. The current path of least resistance appears to be down. Either way, WTI may get dragged along.

MACRO OUTLOOK

Crude Oil at Risk of Losing Its Leadership Status This Cycle. Crude oil's failure to rally in 1Q despite an interestrate hike may confirm a break from past norms. Declining prices, considered transitory in 2015, may shift the market's paradigm if crude holds below \$50 a barrel. The Federal Reserve rarely increases rates without support from rallying crude oil prices. During the central bank's three rate-tightening cycles since 1990, crude oil rallied almost 60% on average. It doubled during the latest higher-rate cycle from June 2004 through June 2006.

Crude Oil Still a Commodity Leader at 1Q End



In the current cycle, the front crude oil futures price has increased more than most commodities, up 35% vs. 24% for the spot Bloomberg Commodity Index and 18% for gold to March 31. Total energy returns have been much lower, but should catch-up some with flattening curves.

Front Energy Futures

Ticker	Last	Chg YTD %	Chg MTD	1 Yr					
,			ò	Ago	Ago	Pct 1Yr	2 Year	High	From
							Percent		2yr High
+ Generic 1st 'XB' Future	170.0	+2.1%	+12.44%	142.6	178.0	+19.2%	-4.5%	214.6	-44.6%
+ Generic 1st 'CL' Future	50.7	-5.6%		38.3	47.6	+32.3%	6.5%	61.4	-10.7%
+ Generic 1st 'CO' Future	52.8	-7.0%	-4.96%	39.6	55.1	+33.4%	-4.1%	67.8	
+ Generic 1st 'H0' Future	157.4	-7.7%	-2.91%	118.5	171.8	+32.8%	-8.4%	201.6	-44.2%
+ Generic 1st 'NG' Future	3.2	-14.4%	+14.92%	2.0	2.6	+62.7%	20.8%	3.9	7%

Weaker Oil Implications: Less 'Transitory,' More Paradigm Shift. The weak crude oil prices dubbed in 2015 as "transitory" by Janet Yellen may be deemed less so in 2017. If the recent breakdown is sustained, global implications are increasingly disinflationary. Measured since the end of 1999, crude oil's price gain has diminished to 97%, bouncing above the 45% rate of CPI change and well below broad commodities, up 204%. Crude is increasingly significant in the global economy, but advancing technology is pressuring prices, shifting it

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to a deflationary factor since 2014.

Crude Oil Back Near CPI, A Drag on Commodities



The paradigm shift that's pressuring oil prices appears to be a participant in the broader disinflation trend driven by technology and a maturing society. WTI averaged \$48.70 a barrel in 2015, \$43.50 in 2016 and \$51.80 in 2017 as of March 31. Sustaining above \$50 in 2017 may be an accomplishment.

Declining Crude Oil Prices, the New Risk-Off Leading Indicator. Looking ahead to the new world of North American energy independence, lower crude oil means a lower stock market. The sharpest correction in stocks since the U.S. election, minus 2% from the March 1 record, was preceded by the plunge in crude oil back below \$50 a barrel on March 9. When crude failed from \$60 in a similar pattern in July 2015, the S&P 500 consolidated for another month and a half at 2,100, then quickly plunged 11% to below 1,870 on Aug. 25.

High-Velocity Crude Declines Followed by S&P 500



Stocks initially recovered to end 2015 as crude stabilized. Neither bottomed until oil had declined 56% on Feb. 11, 2016, and the S&P had dropped 13%. The 2,100 level, where the S&P began its 2015 breakdown and its postelection rally, could mark a target support level, notably if

crude revisits \$40.

For Crude, \$50 the New \$100 in U.S. & Canada Fuel Production. It took a crude-oil plunge to below \$50 a barrel from \$100 to stall U.S. and Canadian liquid-fuel production in 2015-16, and even lower prices may be needed to curtail this trend. With prices stabilizing above \$50 in January-March, the Department of Energy reopened its production-spigot estimates, indicating that output will cross the flat consumption regression line in 2018. Consumption will have to increase to not be surpassed by production. Some private estimates are more aggressive.

Liquid-Fuel Supply May Cross Flat Demand in 2018



This paradigm-shifting trend in North American liquid-fuel production is set to accelerate, with support from the Trump administration. In the shorter term, near-record futures open interest and managed-money net positions indicate elevated liquidation risk.

The Fork in the Fuel-Production Road May Lead to Lower Crude Oil. OPEC may need to sustain deeper production cuts to arrest declining crude-oil prices. U.S. and Canadian liquid-fuel production is expected to heat up again on the back of 4Q's crude-oil surge to above \$50 a barrel, and with the Trump administration's drill-at-will bias. Estimated at almost 20 million barrels a day, U.S. and Canadian fuel production is the same as 2014's end. Since 2011, it has increased about a third compared with 7% for OPEC production and global consumption.

The U.S. and Canada produced 80% of their liquid-fuel needs in 2016, up from 65% in 2011. The U.S. Department of Energy projects about 86% in 2018. Sustained low oil prices would counter that trend, while higher prices are a likely accelerant.

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U.S., Canada Fuel-Production Trend Set to Resume



Metals

Industrial (Index weight: 18.0% of BCOM. Performance: March -2.0, YTD +7.6, Spot 7.8%)

Precious (Index weight: 15.6% of BCOM.

Performance: March -0.6%, YTD +9.8%, Spot +10.1%)

Metals Breaking Away for the Gold in 1Q

Metals See Some 1Q Mean Reversion; the Real Game May Begin in 2Q. The 3.5% 1Q decline in the Bloomberg Dollar Spot Index was a primary metals support factor but simply retraced about half of 4Q's rally, which should make 2Q a truth teller. If the dollar decline since the start of the Federal Reserve rate-hike cycle continues, then metals should be primary beneficiaries, led by precious. Up 9.8% in 1Q, the Bloomberg Precious Metals Subindex surpassed industrials' 7.6% gain. Precious metals slid 14% in 4Q. Optimism about the Trump administration tapered a bit by 1Q's end.

Precious metals continuing to outperform industrials has negative implications for the economy and bond yields. The second quarter should help to clarify the duration of the 1Q trends. Metals rallying together is an endorsement of further tightening. Precious up and industrials down is the opposite.

PERFORMANCE DRIVERS

Aluminum, Silver Vying for 1Q Gold, May Be Early Recovery Days. Silver, uniquely situated as a quasicurrency, may be a prime candidate to lead the commodities recovery. Benefiting from the tug between being both an industrial (50% of silver demand) and precious metal, silver led all Bloomberg Commodity Index components for much of 2017, ending 1Q up 13.9%, roughly matching its 14% 2016 total return. That occurred despite a 2.8% gain in the Bloomberg Dollar Spot index. Among the commodities with the highest negative correlation, silver has been supported by a 3.5% decline in the dollar in 2017.

Aluminum, Silver on Top Step in 2017

Security	Chg YTD %	1	Chg	Chg 6M	1Yr %	2Yr %
			March	Pct	Chg	Chg
Bloomberg Aluminum Subindex To	+15.4%		+1.8%	+16.5%	+26.8%	1.8%
Bloomberg Silver Subindex Tota	+13.9%			-5.7%	+16.0%	6.8%
Bloomberg Precious Metals Subi	+9.8%		6%	-5.7%	+4.3%	5.1%
Bloomberg Gold Subindex Total	+8.2%			-5.5%	+.1%	4.2%
Bloomberg Industrial Metals Su	+7.6%			+14.2%	+26.2%	
Bloomberg Zinc Subindex Total	+7.4%			+15.6%	+50.5%	28.0%
Bloomberg Copper Subindex Tota	+5.5%			+19.2%	+19.5%	-5.8%
Bloomberg Nickel Subindex Tota	3%		-8.9%	-6.0%	+16.2%	-21.5%
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Down 13% and 17% in 4Q, gold and silver simply snapped back, supported by dollar weakness. If the dollar decline continues, quasi-currency gold and silver could be just getting started, retracing the declines from their 2011 peaks. Dollar strength may be more favorable to industrial metals.

MACRO OUTLOOK

Metals Are Increasingly the Best-Performing Commodity Studs. Up more than a third since the start of the Federal Reserve rate-hike cycle, the Bloomberg Industrial Metals Subindex appears in the reflation drivers seat. If industrials falter, notably vs. precious metals, rate-hike expectations are likely to be reduced, similar to most of 2016. The economically desirable situation is for industrials to outperform precious. With energy languishing in a technology-driven paradigm shift, the metals appear to be the increasingly dominant performers among all commodities.

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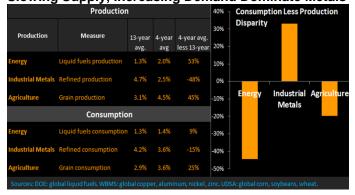
Industrial Metals - Best TR Performer With Rate Hikes



Metals have the advantage of not being subject to the high roll-cost risks of other sectors, and are benefiting from their use in advanced technology. Mined since antiquity, metal supplies are finite. Yet demand is increasing, notably due to technology, silver being a prime example.

Production Excess Over Consumption Advances in Stuff We Can Grow. Relative to energy and agriculture, industrial metals are on a path to scarcity. More-recent production-average analysis shows only the industrial metals declining relative to the longer-term averages (13 years is the longest similar available data). Benefiting from a record run of bumper crops, the grains are the primary driver of increasing agricultural supply, which is also supplanting liquid-fuel production via biofuels. Metals are the only sector where supply is increasing at a slower pace than demand.

Slowing Supply, Increasing Demand Dominate Metals



Advancing technology may increase this sector disparity, though the grains are overdue for a production blip. Gold is the primary precious metal, but mining production is a minor price factor. Money-supply growth and the dollar are factors for the quasi-currency metals, both appearing to be supportive.

With Supplies Finite, Metals Outperformance May Accelerate. Metals have been the total-return leaders and may be set to break away. Focusing on what investors obtain in long-only commodities, precious and industrial metals provide the most straightforward returns relative to spot changes, superior performance historically, and the prospect of increasingly constrained supply and demand conditions due to rapidly advancing technology. Quasi-currency precious metals are straightforward yet benefit from increasing industrial demand, notably for silver and platinum-group metals.

Commodities That Can't Be Grown Outperform



Despite higher storage costs, industrial metals have a history of total returns only slightly less than spot -- 50 bps annualized since 2000, based on the Bloomberg Industrial Metals Subindex TR. Combined, industrial and precious metals may become the focus for commodity investors.

Metals-Alone Portfolio May Point to Continued Outperformance. The outlook may be more favorable than the outperforming past of a portfolio diversified with metals alone vs. one that uses broad commodities. Just below 10%, the standard deviation for a diversified portfolio that tracks the Bloomberg Precious and Industrial Metals subindexes was about the same as a similar vehicle tracking the Bloomberg Commodity Index since 1999, but with 185 bps of annualized outperformance. Metals-only has provided a Sharpe ratio of 0.60 vs. 0.48 for broad commodities.

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Portfolio Tracking Metals Only vs. Broad BCOM



While many commodity prices have been pressured by technological advances that have increased supply or reduced demand, notably in energy, metals have been hurt less. Silver supply, for example, is stalling as prices slump, while electronics have shored up demand for the metal.

INDUSTRIALS OUTLOOK

Industrial Metals May Be Just Catching Up to Flattening Curve. Industrial metals' performance is catching up with the backwardation-trending futures curve in place since 2013. At an average contango of 1.3%, it's flatter than for precious metals, an indication of a favorable supply and demand balance. Record open interest is an endorsement yet elevates liquidation risk. On a path to recovery in 2014, the industrial metals rally appeared to have been derailed by plunging energy. If lower crude is no longer a pressure factor, industrial metals should resume recovery.

Industrial Metals on Path to Recovery



Industrial metals is the only sector without increasing open interest, notably because of a reduction in aluminum positions, likely due to short covering. Led by copper,

managed-money net positions have also declined 3%, second to energy at 18%, which is clearly under liquidation.

Industrial Metals Hold True to Tightening, Energy Shows No Go. About 15 months into the current Federal Reserve rate-hike cycle, the Bloomberg Industrial Metals Subindex is showing endorsement. It's on the same performance track as the last tightening cycle, with a total return up about a third. In contrast, the Bloomberg Energy Subindex total return is up just 6% since Dec. 15, 2015 vs. an 71% surge over the same number of days from June 29, 2004 to October 3, 2005. Spot energy is up 40% in the current cycle compared with an 111% jump in the same 2004-05 period.

Industrial Metals on Pace With Previous Hike Cycle



Industrial metals vs. energy is an indication of the predominant paradigm shift in markets. The supply-to-demand balance is tightening in metals due to rapidly advancing technology. The opposite is true in energy. Interest rates are currently where they started the past cycle.

SUPPLY & DEMAND

Trading Places as Energy the Dud, Industrial Metals the New Stud. Lower prices may be necessary to reduce the global energy glut, but the opposite situation appears in place in industrial metals. Department of Energy world liquid fuel output and consumption estimates indicate little chance of demand exceeding supply through 2018. Lower prices would likely make that happen sooner. Similar analysis of the industrial metals shows the greatest excess of demand over supply, and for the longest period in more than 10 years. Higher prices are likely needed to balance industrial metals.

Tables & Charts – March 2017 Edition

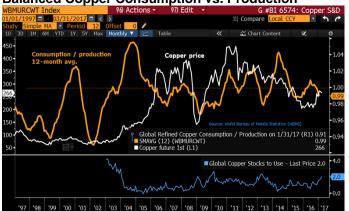
Supply/Demand Balances Favor Industrial Metals



Performance so far in 2017 indicates the sectors heading on the path of least resistance. The Bloomberg Industrial Metals Subindex is up 7.6% vs. a 11.4% decline in the energy subindex in 1Q. Precious metals are leading all sectors, up 9.8%, potentially a disconcerting macroeconomic indication.

Flat Copper Consumption vs. Production May Limit Price Recovery. Copper's performance may take a back seat for a while relative to the other metals. With the trend in consumption similar to production, copper basically appears ho-hum. Refined copper consumption estimates are about flat relative to production after exceeding it for most of 2016, but barely. The 12-month average of World Bureau of Metal Statistics estimates reached only 1.01x in 2016 compared with 1.04x in 2014, before the overwhelming force of collapsing crude oil lowered all boats.

Balanced Copper Consumption vs. Production



The nine-year demand vs. supply peak from 2014 may be revisited if the influence of lower prices on consumption and production pans out like it has historically.

Aluminum May Gain More Luster on Strong Demand and Low Stocks. Aluminum finds itself in the longest sustained period of consumption topping production since the World Bureau of Metal Statistics began tracking the data. This comes on the back of a similar protracted price decline, which should support continued recovery in aluminum prices and outweigh downside risk. Though not as elevated as the past, the 12-month average ratio of consumption-to-production has been above 1x since the end of 2014, while aluminum stocks-to-use estimates have declined to a new database low.

Aluminum Consumption Exceeding Production



Consumption and production estimates are less straightforward than analyzing price movements. If the historical trends prevail of consumption increasing relative to production after sharp price declines, aluminum appears poised to revisit the 2012 high of almost \$2,200 a ton.

In Far Better Condition vs. 2010 Peak, Zinc May Have Room to Run. In the big picture, excess zinc demand vs. supply is much more favorable than when prices peaked in 2010. The potential for a peak demand-to-supply ratio from a lower level than 2014's top indicates that the doubling in prices from 2015's low is at elevated correction risk, though not as extreme as 40% in 2010, when consumption remained below production. Sustaining the current demand vs. supply disparity is price-supportive, potentially similar to the 380% surge from the 2004 low to 2008 peak.

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Consumption vs. Production Ratio May Have Peaked



Bloomberg Intelligence analysis of World Bureau of Metal Statistics data on global zinc-slab consumption and production focuses on 12-month averages. Similar to past trends, demand appears to be finally responding quite favorably in excess of supply on the back of the multiyear price decline.

Lowly Nickel May Be Warming for a Recovery on Surging Demand. Nickel prices may be on the road to recovery, as estimates of global refined consumption have reached their greatest extreme vs. production in 10 years. Since bottoming in April 2015 at 0.84x, the lowest 12-month average ratio in World Bureau of Metal Statistics database history, nickel's consumption has jumped 23% on average vs. 1% for production, shifting demand to 1.03x supply. Such an extreme shift in favor of demand is unprecedented since the Bureau started tracking nickel in 1995.

Refined Nickel Consumption Leaps vs. Production



Although nickel stocks-to-use remains elevated historically, it has declined from the 2015 peak and is trending lower as demand increases. Nickel deficits may persist due to environment-related closings of mines in the Philippines and project delays.

PRECIOUS OUTLOOK

Bucking Normal Adversaries Indicates Gold, Silver Set to Rally. If precious metals can hold their own despite a 19% rally in the U.S. Dollar Spot Index and 38% appreciation in the S&P 500 since the start of 2014, metals should be poised to perform when their traditional adversaries falter. Toppish activity appears clear in the dollar, down 3.5% in 2017 despite the U.S. rate cycle well on its way. With a beta of minus 1.5x to the dollar in the past 10 years, the Bloomberg Precious Metals Subindex should be a prime beneficiary if the dollar is done rallying.

Supply Shifts Downward, Prices Begin to Recover



Historically zero-correlated to the stock market, the relationship to precious metals is likely to be much more negative in the near future. A declining stock market is a prime factor to reduce rate-hike expectations and thus the dollar's value, supporting gold and silver, as occurred in 1Q16.

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Agriculture (Index weight: 30.4% of BCOM. Performance: March -5.8%, YTD -3.0%, Spot -1.6)

Grains (Index Weight: 23.3% of BCOM.

Performance: March -5.2%, YTD -1.4%, Spot +0.2%)

Softs (Weight: 7.1% of BCOM.

Performance: March -6.2%, YTD -4.8%, Spot -4.0%)

The Ides of March May Leave Ags Better Off in 2Q

Agriculture Marks Time for Ramp-Up of U.S. Crop-Growing Season. Compared with total returns of minus 5.8% in March and minus 3.0% in 1Q, the Bloomberg Agriculture Subindex spot decline of 1.6% indicates marking time for the U.S. growing season. Anticipating a continuation of the strong trend in U.S. production, and coincident with South America's harvest, agricultural commodities succumbed to the ides of March, historically one of the worst months. April generally fares better and was 2016's best month, up 7%. New-crop corn's visit to \$4 a bushel appeared to mark a top, for now.

Soybeans, the primary profitable grain, were the biggest drag on 1Q returns, led by oil. Yet extreme net shorts may signal bottoming. New-crop corn topping at \$4 a bushel put a lid on 1Q gains, though \$4.50 may be on the radar by midsummer. Cotton is the leader and may be just warming up with cattle.

PERFORMANCE DRIVERS

Pressured by South American Harvest, Ags Refocus on U.S Planting. The South American recovery in soybean production was a leading agriculture drag in March as the market looks ahead to the primary performance factor -- the U.S. growing season. The last day of March USDA annual prospective plantings report showing more potential soybean acres sowed than expected was an additional drag. Reduced restrictions on European and Mexican sugar exports pressured the Bloomberg Sugar Subindex to be the leading loser, declining 12.8% in March for a 1Q loss of 13.9%. Despite a 5.2% March decline, the Bloomberg Grains Subindex ended 1Q with a minus 1.4% total return and unchanged spot.

Sugar and Soybeans Lead 2017 Ag Decliners



Making up three-quarters of agricultural commodities, grains are marking time for U.S. growing season. Due to volume traded and world production, the soybean complex has the highest Bloomberg Commodity Index weighting, about 12%. Cotton and live cattle were primary 1Q gainers, with some help from wheat.

MACRO OUTLOOK

Fewer Short-Leaning Ags This Season Signals Improving Sentiment. Indicating a potential sentiment shift, the sum of Bloomberg Agriculture Subindex component managed-money net positions ended 1Q with the least amount of short positions in 1Q in two years. In 2016, the index bottom coincided with the greatest net-short position on record in the first week of March. Three months later, the index topped 25% higher along with elevated positions. Wheat, corn and soybean oil are currently the primary shorts in anticipation of growing season.

Ags Less Beared-Up May Be Good and Bad



As a result, the market is without the support provided by extended shorts, though it could have just declined too low to justify such shorts. Another bumper crop could be necessary to sustain lower prices, as demand has responded quite positively to multiple years of lower prices.

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Expecting Bumper Trend to Continue May Be the Ag Opportunity. Some normalization in the U.S. grain bumper-crop trend might be all that's needed to boost prices. In 2016, grain production increased 18% above the previous five-year average, the most since 28% in 1994. In 1995, production dipped 9% below the average and the Bloomberg Grain Subindex total return was 35% after declining 16% in 1994. USDA 2017 estimates have corn, soybean and wheat production flat, which would still be 12% above the five-year average. This appears to be priced in the market.

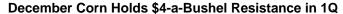
Grain production would have to decline 11%, the most since 1995, to match the five-year average. This isn't expected, but production trends have always reverted to the mean -- it's just a question of time. The average period above the five-year norm since 1971 is 5.8 years; 2017 is the fifth since 2012.

Record U.S. Grain Production Trend Subject to End



GRAINS OUTLOOK

New-Crop Corn May Be Ripe for Another Run to \$4.50 a Bushel. If new-crop December corn at \$3.88 a bushel repeats the trend of the past two years, it may be a few months away from a spurt to \$4.50. Pricing in some risk of reduced production should do it, but the rallies of the past two years were fleeting. The 1Q story in the grains can be told by December corn failing to sustain above \$4. Similar to 2015-16, managed-money net positions have shifted to short. Yet open interest has also increased, indicating added shorts, similar to price bottoms over the last two years.





A cold and wet spring will favor increased bean planting, supporting corn prices. The axiom of "plant in the dust, the corn bins will bust" won't aid prices. Following the money may shift more acreage to beans than generally expected -- another potential support for corn. Weather will define 2Q.

Big Soybean Oil Shift That's Pressuring Beans May Be Excessive. Substantial liquidation in soybean oil open interest and the swift long-to-short reversal in managed-money net positions that's leading the complex lower may be excessive. At minus 19,748, managed-money net positions abruptly shifted to the greatest short level in four years. The 2017 soybean oil reversal of 105,270 contracts was the most among all BCOM commodities. The 10% one-year decline in open interest was the third-most extreme (behind lean hogs and gold). Liquidation appears excessive, which may mark a price low

Big Shift to Short Bean Oil Pressuring Complex



Soybean oil skidded with palm and crude oil, ending 1Q with an 8.9% decline as measured by the Bloomberg subindex. Representing the majority of the bean crush, the Bloomberg Soybean Meal index ended the quarter with only a 1.6% decline after plunging 6.3% in March.

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SOFTS OUTLOOK

Souring Sugar Following Spurt Is a Good Indicator for Broad Ags. Raw sugar's 13.9% spot decline in 2017 after a 28% rally in 2016 could indicate potential recovery in the Bloomberg Agriculture Subindex, notably the grains. The lifting of trade restrictions in the EU and Mexico contributed to some mean reversion in sugar prices. Rallies in sugar, the most widely traded soft commodity and predominately exported from Brazil, have a unique history of leading broader agriculture, with an increasing connection to corn, via ethanol.

Sugar Reverting Back to Broad Ag Performance



Potentially similar to 2009 when sugar rallied 128% and broad agriculture increased only 22%, broad ags caught up with a 48% rally in 2010. Weather can be unpredictable, yet sugar's performance may be a connection between southern and northern hemisphere patterns affecting agriculture production.

Living on Higher Cotton; Price Poised to Rise, But Risk Elevated. Following a protracted slide from historical extremes in 2011, favorably shifting cotton fundamentals should continue to support higher prices. The broadest measure of global demand vs. supply has reached the most extreme disparity in almost 30 years. This comes as China's production slumps and demand appears to be responding favorably to lower prices. A key indicator of global demand, U.S. exports are on a tear, increasing at the highest velocity in six years as elevated ending stocks decline.

Record futures positions are an endorsement of higher prices yet indicate above-average liquidation risk, potentially similar to gold in July and oil in February. Cotton in backwardation is favorable to investors, as it's providing index total returns in excess of spot changes.

Global Cotton Demand Exceeding Supply by Most in Almost 30 Years. Cotton prices may continue to find support, based on U.S. Department of Agriculture data that the world's consumption exceeds production by 1.1x on a 12-month average basis, the highest rate since 1988. China's shift to reduce inventories amid the subsequent wide excess of demand vs. supply is a key driver. The USDA estimates that China's cotton demand exceeds supply by 1.61x. That's down from the peak of 1.7x at the end of 2016 yet near the highest ever, though its China-based figures may be less accurate.

Demand Exceeding Supply by Most Since 1988

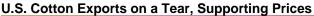


The recent surge in global cotton demand vs. supply follows a multi-decade bottom at 0.87x at the end of 2012. China's consumption remains near 32% of the global total after plunging to 33% at the end of 2012 from 40% in 2011. The lowest was 29% in 2015.

Six-Year-High World Cotton Demand, U.S. Exports Boosting Prices. World cotton consumption is on pace to again exceed 2016's six-year high, but it matters more relative to production, as U.S. exports -- the better indicator of cotton prices -- are on a tear. The velocity of cotton exports from the global swing supplier, the U.S., is a good barometer of global demand. At 39%, the 12-month rate of change in U.S. cotton exports, as of March, is the highest since January 2011, just prior to the cotton peak, which is more than 180% above current prices.

Among USDA data sets, cotton prices have the highest positive correlation annually since 1999 to U.S. exports, at 0.5x. By comparison, the correlation to changes in world consumption is 0.1x. The U.S. is the world's largest cotton exporter, at 33% of the 2016 total and 45% on average since 1999.

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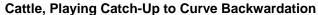


LIVESTOCK- OUTLOOK

Brazil May Be the Spark Needed to Get the Bull Back in Cattle. The tainted-beef scandal in Brazil may be the spark needed to light a longer-term fire in live-cattle futures. Subject to a short-term pullback but up only 3.4% in 2017, front futures are far from extended, except to the downside on a longer-term basis. Last year was the most extreme annual close below the five-year average in futures history. Indicating excess demand vs. supply at the end of 2016, the futures curve reached the steepest backwardation in a decade, well before the scandal.

Due to backwardation, the Bloomberg Live Cattle Subindex is up 5.2% in 2017, with the highest gross annual roll yield of all BCOM commodities of plus 3%. Among USDA meat data sets, live cattle has the highest correlation to global exports -- a relationship also at multidecade extremes.

Cattle Futures Show New Life, Catching Up to Backwardated Curve. Energized by the tainted-meat scandal in Brazil, the world's largest beef exporter, current live-cattle futures may confirm a long-term bottom. The October nadir just below \$1 a pound was the lowest in six years. It occurred despite the futures curve moving steeper into backwardation, a sign of increasing demand relative to supply. The one-year curve, 11% in backwardation, is the most extreme since 2003, when the Bloomberg Live Cattle Subindex had a total return of 14% despite a 9% spot decline.





The index tacked on another 24% in 2004-05 as the curve flattened and spot prices gained 31%. Reaching a 10-month high of \$1.22 a pound on March 22, futures could make a run for good resistance near the 2016 high of \$1.41. The \$1.13 area should offer good support.

Live Cattle May Be on the Bullish Path With Increasing Exports. Live-cattle futures appear underpriced if global exports continue to recover, or don't. A reduction in meat from Brazil, the world's largest exporter, may distort the data, but is a support factor for U.S. CME-traded futures. In a market that can be distorted by a substantial amount of domestic production that isn't exported, live-cattle future prices have the highest correlation among USDA meat and beef data sets

Live Cattle Appears at a Discount to World Exports

to world exports, at 0.62 annually since 2000.



At the end of 2016, the two-year decline in meat and beef exports was 5.5%, but live-cattle prices declined 5.3x at 29%. With a two-year annual beta of 1.6x, the past few years' decline in cattle appears excessive. Brazil's tainted-beef issue may be the prod to get live cattle back on a bullish path.

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DATA on BI COMD

Performance - Overview Key Metrics

■ Commodities ■ BCOM Index TR ■ Energy Index ■ Grains Index ■ Industrial Metals Index	0.0 0.6 0.5 -1.1 0.3 0.2	1.0 4.1 -0.1 0.5 0.8	-2.7 -1.5 -5.2 -2.0 -0.6	-2.7 -1.5 -5.2 -2.0	-2.3 -11.4 -1.4 7.6	-2.3 -11.4 -1.4	8.7 13.6 -7.3	-12.6 -31.4	-36.2 -63.3	-39.4 -61.2
■ Energy Index■ Grains Index■ Industrial Metals Index	0.6 0.5 -1.1 0.3 0.2	4.1 -0.1 0.5 0.8	-1.5 -5.2 -2.0	-1.5 -5.2	-11.4 -1.4	-11.4	13.6	-31.4	LEGISON .	
■ Grains Index■ Industrial Metals Index	0.5 -1.1 0.3 0.2	-0.1 0.5 0.8	-5.2 -2.0	-5.2	-1.4				-63.3	-61.2
■ Industrial Metals Index	-1.1 0.3 0.2	0.5 0.8	-2.0			-1.4	-73	202/vire/		
	0.3 0.2	0.8		-2.0	7.6		1.3	-18.6	-41.6	-36.9
	0.2	100000	-0.6		7.0	7.6	26.2	-0.3	-7.9	-27.8
■ Precious Metals Index		1.0	0.0	-0.6	9.8	9.8	4.3	5.1	-5.8	-32.7
■ Softs Index	02021	-1.9	-6.2	-6.2	-4.8	-4.8	8.7	12.5	-28.1	-41.8
■ Livestock Index	-0.2	-2.0	0.2	0.2	0.1	0.1	-6.6	-15.0	-26.5	-16.0
Agriculture Index	0.1	-0.9	-5.8	-5.8	-3.0	-3.0	-1.6	-8.3	-34.9	-34.4
■ BCOM EX Indices TR			-	//20/0				141700		
■ BCOM Index Roll Select TR	0.0	0.8	-2.5	-2.5	-0.8	-0.8	11.8	-8.0	-30.6	-34.2
■ BCOM Index Forwards TR										
■ BCOM Index ER	0.0	1.0	-2.7	-2.7	-2.5	-2.5	8.3	-13.0	-36.6	-39.9
■ BCOM Index Spot	0.0	1.0	-2.7	-2.7	-0.3	-0.3	18.5	4.4	-22.1	-23.2
■ Stocks										
■ S&P 500 Index TR	0.3	1.1	0.3	0.3	6.3	6.3	17.4	19.5	34.7	87.1
■ Bonds										
■ Barclays U.S. Aggregate	-0.1	-0.1	-0.2	-0.2	0.7	0.7	0.3	2.3	8.1	12.1
■ Currencies										
■ Bloomberg U.S. Dollar Spot In	-0.1	0.3	-1.3	-1.3	-3.5	-3.5	3.4	1.9	20.4	25.0
US Dollar Index	0.1	0.9	-0.6	-0.6	-1.7	-1.7	6.3	2.2	25.5	27.2
Pound Index	0.5	0.9	0.6	0.6	0.1	0.1	-11.6	-17.3	-15.8	-12.1

Name	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
■ Commodities											
■ BCOM Index TR	-2.3%	11.8%	-24.7%	-17.0%	-9.5%	-1.1%	-13.3%	16.8%	18.9%	-35.6%	16.2%
■ Energy Index	-11.9%	16.3%	-38.9%	-39.3%	5.2%	-9.4%	-16.0%	-10.5%	-5.3%	-47.3%	20.7%
■ Grains Index	-2.0%	-5.9%	-19.4%	-9.4%	-16.9%	18.3%	-14.4%	30.3%	-1.6%	-26.3%	42.1%
■ Industrial Metals Index	8.9%	19.9%	-26.9%	-6.9%	-13.6%	0.7%	-24.2%	16.2%	80.0%	-48.3%	-9.9%
■ Precious Metals Index	9.5%	9.5%	-11.5%	-6.7%	-30.8%	6.3%	4.6%	42.7%	29.2%	-4.1%	26.0%
■ Softs Index	-5.0%	13.2%	-9.9%	-10.1%	-16.9%	-22.4%	-14.0%	59.9%	44.2%	-28.4%	-3.5%
■ Livestock Index	0.3%	-5.6%	-18.8%	11.6%	-3.5%	-3.5%	-2.3%	9.3%	-15.1%	-28.4%	-10.7%
Agriculture Index	-3.1%	2.1%	-15.6%	-9.2%	-14.3%	4.0%	-14.4%	38.5%	13.7%	-27.5%	29.9%
■ BCOM EX Indices TR						1					
■ BCOM Index Roll Select TR	-0.9%	14.6%	-23.4%	-15.2%	-9.1%	-0.4%	-8.8%	19.5%	23.1%	-29.8%	24.9%
■ BCOM Index Forwards TR											
■ BCOM Index ER	-2.5%	11.4%	-24.7%	-17.0%	-9.6%	-1.1%	-13.4%	16.7%	18.7%	-36.6%	11.1%
■ BCOM Index Spot	-0.3%	23.1%	-18.4%	-17.0%	-8.7%	3.7%	-8.1%	26.4%	41.2%	-28.9%	25.3%
■ Stocks											
■ S&P 500 Index TR	6.3%	12.0%	1.4%	13.7%	32.4%	16.0%	2.1%	15.1%	26.5%	-37.0%	5.5%
■ Bonds											
■ Barclays U.S. Aggregate	0.7%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%	7.0%
■ Currencies											
■ Bloomberg U.S. Dollar Spot Index	-3.4%	2.8%	9.0%	11.0%	3.3%	-0.7%	1.8%	-1.8%	-4.8%	8.9%	-6.7%
US Dollar Index	-1.8%	3.6%	9.3%	12.8%	0.3%	-0.5%	1.5%	1.5%	-4.2%	6.0%	-8.3%
Pound Index	0.7%	-30.3%	-5.7%	-4.3%	3.9%	8.7%	-0.5%	-6.6%	17.3%	-45.5%	-4.2%

Tables & Charts – March 2017 Edition

Performance – Commodity Total Returns

Key Metrics

Name	% Change on Day	WTD % Change	MTD % Change	3 Mth % Change	YTD % Change	1 Yr % Change	2 Yr % Change
■ BCOM Total Return Indices					-		
Aluminum Index	-0.5	1.2	1.8	15.4	15.4	26.8	1.8
Silver Index	0.3	2.9	-1.1	13.9	13.9	16.0	6.8
Gold Index	0.3	0.0	-0.4	8.2	8.2	0.1	4.2
Cotton Index	1.4	-0.2	1.4	7.9	7.9	30.2	17.8
Zinc Index	-3.5	-2.2	-2.1	7.4	7.4	50.5	28.0
Copper Index	-0.7	0.8	-2.2	5.5	5.5	19.5	-5.8
Live Cattle Index	0.0	-1.7	2.7	5.2	5.2	-0.2	-16.0
Platinum Index	-0.3	-1.9	-7.9	4.9	4.9	-3.4	-17.6
Wheat Index	1.3	0.4	-3.8	1.8	1.8	-22.6	-30.7
Corn Index	1.9	2.3	-2.5	1.6	1.6	-5.2	-20.2
Coffee Index	0.0	1.3	-2.3	0.1	0.1	-0.1	-13.8
Nickel Index	-1.1	1.5	-8.9	-0.3	-0.3	16.2	-21.5
HRW Wheat Index	0.8	-1.7	-9.2	-2.1	-2.1	-26.5	-44.6
Soybean Meal Index	-2.1	-3.1	-8.3	-3.7	-3.7	12.6	-2.8
Soybeans Index	-1.8	-3.0	-8.6	-6.6	-6.6	2.2	-3.2
Lean Hogs Index	-0.5	-2.5	-3.2	-6.9	-6.9	-15.9	-12.5
Brent Crude Index	0.8	5.2	-5.6	-7.7	-7.7	16.1	-30.6
Soybean Oil Index	-0.7	-1.4	-6.3	-8.9	-8.9	-11.6	-4.0
WTI Crude Index	0.5	5.5	-7.0	-9.0	-9.0	10.1	-36.3
Heating Oil Index	0.9	4.7	-4.5	-10.3	-10.3	19.0	-28.4
Gasoline Index	1.1	5.4	-2.9	-12.2	-12.2	5.9	-19.2
Sugar Index	-0.3	-5.3	-12.8	-13.9	-13.9	4.4	22.4
Natural Gas Index	0.0	1.2	11.2	-17.0	-17.0	17.0	-38.2

Name	2017↑	2016	2015	2014	2013	2012	2011	2010	2009	2008
■ BCOM Total Return Indices										
Aluminum Index	16.0%	9.7%	-22.9%	-3.1%	-20.7%	-4.0%	-21.7%	5.4%	33.8%	-40.1%
Silver Index	13.6%	14.0%	-12.7%	-20.4%	-36.6%	7.1%	-10.1%	81.8%	47.6%	-25.4%
Zinc Index	11.3%	57.5%	-28.0%	3.5%	-7.0%	9.0%	-27.8%	-8.8%	98.3%	-51.0%
Gold Index	7.9%	7.7%	-10.9%	-1.7%	-28.7%	6.1%	9.6%	28.7%	22.9%	3.9%
Cotton Index	6.3%	10.5%	3.0%	-21.2%	9.0%	-12.7%	-21.7%	98.2%	30.1%	-42.8%
Copper Index	6.2%	15.7%	-25.1%	-16.6%	-8.8%	5.0%	-24.4%	29.5%	130.0%	-53.1%
Platinum Index	5.3%	0.8%	-26.5%	-12.3%	-11.8%	8.7%	-21.8%	19.3%	54.0%	-38.2%
Live Cattle Index	5.2%	-7.4%	-14.3%	22.1%	-5.0%	-3.9%	-1.0%	15.0%	-9.8%	-26.2%
Nickel Index	0.7%	11.8%	-42.6%	7.3%	-20.1%	-10.2%	-24.7%	32.2%	54.9%	-56.2%
Wheat Index	0.5%	-24.1%	-22.2%	-9.4%	-27.2%	9.8%	-34.0%	21.2%	-26.0%	-38.5%
Coffee Index	0.1%	-1.3%	-31.5%	37.8%	-30.5%	-41.6%	-11.2%	67.0%	10.3%	-26.2%
Corn Index	-0.3%	-9.8%	-19.2%	-13.3%	-30.3%	19.0%	1.1%	30.7%	-10.1%	-21.9%
Soybean Meal Index	-1.6%	18.1%	-18.0%	11.8%	20.0%	49.1%	-18.1%	38.9%	34.7%	-8.6%
HRW Wheat Index	-2.9%	-25.3%	-32.7%	-4.7%	-26.2%	5.6%	-22.9%	42.1%	-23.8%	-36.5%
Soybeans Index	-4.9%	14.8%	-14.6%	-5.5%	10.5%	24.0%	-16.4%	34.9%	22.9%	-21.2%
Lean Hogs Index	-6.4%	-2.9%	-26.1%	-4.4%	-2.0%	-2.9%	-4.6%	0.3%	-22.5%	-31.9%
Soybean Oil Index	-8.3%	7.3%	-7.7%	-20.6%	-22.4%	-9.8%	-15.2%	33.8%	14.2%	-36.5%
Brent Crude Index	-8.4%	25.4%	-45.6%	-47.6%	7.2%	7.6%	16.8%	11.5%	28.6%	-51.2%
WTI Crude Index	-9.4%	7.1%	-44.3%	-41.7%	6.8%	-11.8%	-3.6%	3.8%	4.4%	-53.2%
Heating Oil Index	-11.1%	33.5%	-42.8%	-38.8%	0.4%	5.5%	10.7%	8.3%	20.5%	-47.2%
Gasoline Index	-13.2%	6.4%	-12.6%	-43.8%	1.9%	25.7%	14.5%	13.1%	74.7%	-61.4%
Sugar Index	-13.6%	22.8%	-4.7%	-30.9%	-20.0%	-13.0%	-11.9%	24.0%	86.3%	-19.9%
Natural Gas Index	-17.0%	10.3%	-39.9%	-30.7%	5.0%	-30.6%	-47.1%	-40.6%	-51.6%	-37.1%

Tables & Charts – March 2017 Edition

Performance – Prices

Key Metrics

Name	% Change on Day	WTD % Change	MTD % Change	3 Mth % Change	YTD 3 Change	1 Yr % Change	2 Yr S
■ BCOM Single Commodity Price	111						
Palladium	0.0	-1.9	3.5	16.7	16.7	41.4	8.5
Aluminum	-0.5	0.0	1.7	15.4	15.4	29.6	9.4
Silver	0.2	2.8	-1.0	14.1	14.1	18.0	9.9
Cotton	1.4	0.0	2.7	9.5	9.5	32.3	22.6
Gold	0.1	-0.2	-0.6	8.2	8.2	0.9	5.3
Zinc	-3.6	0.0	-2.4	7.5	7.5	52.2	32.9
Copper (CME)	-0.6	1.0	-1.8	6.0	6.0	21.7	-3.1
Copper (LME)	-2.0	0.0	-2.4	5.4	5.4	19.5	-4.0
Platinum	-0.3	-2.0	-8.0	5.3	5.3	-2.8	-16.9
Wheat	1.3	0.0	0.4	4.5	4.5	-9.9	-16.7
Corn	1.9	0.0	-0.7	3.5	3.5	3.6	-3.2
Live Cattle	0.0	0.0	1.7	3.4	3.4	-9.8	-25.6
Gasoline	1.1	0.0	12.4	2.1	2.1	19.2	-4.5
Coffee	0.0	0.0	-1.0	1.6	1.6	9.3	4.8
HRW Wheat	0.8	0.0	-6.8	0.5	0.5	-11.7	-24.8
Nickel	-1.1	0.0	-8.8	0.0	0.0	18.0	-19.2
Lean Hogs	0.1	0.0	-2.8	-0.7	-0.7	-3.9	5.2
Soybean Meal	-2.1	0.0	-7.3	-1.4	-1.4	14.1	-5.6
Soybeans	-1.8	0.0	-7.7	-5.1	-5.1	3.9	-2.8
WTI Crude	0.8	5.8	-6.0	-5.5	-5.5	32.4	6.6
Gas Oil	0.7	5.4	-3.3	-5.5	-5.5	33.3	-10.1
Brent Crude	-0.2	0.0	-5.0	-7.0	-7.0	33.4	-4.1
Heating Oil	1.0	0.0	-2.9	-7.7	-7.7	32.8	-8.4
Soybean Oil	-0.7	0.0	-5.7	-7.7	-7.7	-7.1	4.6
Sugar	-0.3	0.0	-13.2	-14.1	-14.1	9.2	40.5
Natural Gas	-0.1	3.6	14.9	-14.4	-14.4	62.7	20.7

Name	20171	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
■ BCOM Single Commodity Price	7714544										
Palladium	16.6%	21.6%	-29.6%	11.2%	2.1%	7.2%	-18.3%	96.5%	116.7%	-50.1%	11.7%
Aluminum	16.0%	12.5%	-17.9%	4.1%	-13.9%	2.5%	-18.8%	11.6%	45.6%	-36.0%	-16.6%
Silver	13.4%	15.8%	-11.5%	-19.5%	-35.9%	8.3%	-9.8%	83.7%	49.1%	-24.3%	15.3%
Zinc	11.5%	60.2%	-26.2%	6.0%	-0.5%	12.2%	-25.2%	-3.5%	113.5%	-49.6%	-45.1%
Cotton	9.5%	11.6%	5.0%	-28.8%	12.6%	-18.1%	-36.6%	91.5%	54.2%	-27.9%	21.0%
Gold	7.8%	8.6%	-10.5%	-1.5%	-28.3%	7.0%	10.2%	29.7%	24.0%	5.5%	31.3%
Copper (LME)	7.6%	17.3%	-25.8%	-13.9%	-6.8%	4.2%	-21.2%	31.2%	141.1%	-54.2%	5.3%
Copper (CME)	5.6%	17.4%	-24.4%	-16.8%	-7.0%	6.3%	-22.7%	32.9%	137.3%	-53.6%	5.9%
Platinum	5.4%	1.1%	-26.2%	-11.8%	-10.9%	9.9%	-21.1%	21.5%	55.9%	-38.7%	34.2%
Wheat	3.5%	-13.2%	-20.3%	-2.6%	-22.2%	19.2%	-17.8%	46.7%	-11.3%	-31.0%	76.6%
Live Cattle	3.4%	-15.2%	-16.4%	21.5%	1.8%	8.9%	12.1%	25.9%	0.0%	-10.5%	4.0%
Corn	1.8%	-1.9%	-9.6%	-5.9%	-39.6%	8.0%	2.8%	51.7%	1.8%	-10.6%	16.7%
Coffee	1.6%	8.2%	-23.9%	50.5%	-23.0%	-36.6%	-5.7%	76.9%	21.3%	-17.7%	7.9%
Gasoline	1.2%	31.4%	-11.7%	-48.5%	-0.9%	4.7%	9.5%	19.5%	103.6%	-59.3%	54.5%
Nickel	1.1%	13.5%	-41.8%	9.0%	-18.6%	-9.2%	-24.2%	33.8%	58.8%	-55.4%	-23.4%
Soybean Meal	1.0%	18.4%	-27.5%	-16.7%	4.1%	35.9%	-16.4%	18.0%	4.5%	-9.4%	72.7%
HRW Wheat	0.3%	-10.7%	-25.2%	-2.2%	-22.9%	15.9%	-15.7%	58.7%	-14.9%	-31.0%	79.2%
Lean Hogs	-0.8%	10.6%	-26.4%	-4.9%	-0.3%	1.7%	5.7%	22.3%	7.1%	5.2%	-6.2%
Soybeans	-3.5%	14.4%	-14.5%	-22.3%	-7.5%	18.4%	-14.0%	34.0%	6.9%	-18.9%	75.4%
Gas Oil	-6.5%	53.6%	-36.3%	-45.8%	1.9%	0.3%	21.2%	20.0%	51.9%	-50.1%	62.5%
WTI Crude	-6.6%	45.0%	-30.5%	-45.9%	7.2%	-7.1%	8.2%	15.1%	77.9%	-53.5%	57.2%
Brent Crude	-7.5%	52.4%	-35.0%	-48.3%	-0.3%	3.5%	13.3%	21.6%	70.9%	-51.4%	54.2%
Soybean Oil	-7.98	12.7%	-4.4%	-17.6%	-21.0%	-5.6%	-9.8%	43.1%	21.2%	-31.9%	67.0%
Heating Oil	-8.5%	54.8%	-40.4%	-40.0%	1.1%	3.8%	15.4%	20.1%	50.7%	-46.8%	65.5%
Sugar	-14.1%	28.0%	5.0%	-11.5%	-15.9%	-16.3%	-27.5%	19.2%	128.2%	9.1%	-7.9%
Natural Gas	-14.4%	59.3%	-19.1%	-31.7%	26.2%	12.1%	-32.1%	-20.9%	-0.9%	-24.9%	18.8%

Bloomberg Commodity Index (BCOM) Tables & Charts – March 2017 Edition

Performance – Volatility

Name	Current	1 Change	WTD %	MTD %	1 Mth %	3 Mth %	YTD %	1 Yr %	2 Yr %	3 Yr %	5 Yr 1
■ BCOM 3M Implied Volatility		on Day	Change	Change	Change	Change	Change	Change	Change	Change	Change
Corn	22.7	-2.4	-0.1	0.3	0.3	15.2	15.2	-2.7	-12.6	-24.9	-23.7
Soybean Oil	21.7	-2.3	-0.7	0.8	0.8	11.8	11.8	9.5	6.9	13.4	22.2
Lean Hogs	26.4	3.2	-1.7	6.4	6.4	8.0	8.0	38.7	2.5	16.9	46.6
Unlead Gas	26.9	0.3	-3.5	3.5	3.5	7.2	7.2	-34.4	-30.0	48.7	1.5
Cotton	19.8	1.2	0.4	0.6	0.6	4.0	4.0	-6.0	-0.8	-23.1	-13.3
Wheat	23.0	-3.5	-5.5	-4.2	-4.2	3.8	3.8	-4.8	-24.8	-25.5	-30.0
Soybeans	17.5	-0.5	-0.9	-4.1	-4.1	3.5	3.5	6.7	-14.3	-14.3	-7.2
Soybean Meal	22.1	0.6	0.5	-7.0	-7.0	1.7	1.7	10.4	-8.1	-7.9	3.5
Live Cattle	18.3	2.1	-3.8	4.0	4.0	1.1	1.1	0.3	24.4	110.1	25.8
Crude Oil	28.6	-2.9	-12.7	14.5	14.5	0.4	0.4	-32.4	-36.7	65.9	6.0
HRW Wheat	22.0	-4.1	-5.6	-5.3	-5.3	-1.3	-1.3	-7.8	-24.8	-23.3	-26.7
Brent Crude	28.5	-3.6	-12.3	9.9	9.9	-2.4	-2.4	-32.9	-34.3	75.5	6.1
Heating Oil	26.2	-2.0	-7.7	5.6	5.6	-3.7	-3.7	-30.7	-28.1	64.9	9.1
Coffee	28.6	-2.3	-1.1	4.9	4.9	-3.8	-3.8	-5.0	-24.4	-35.0	-5.3
Gas Oil	27.6	-4.4	-5.5	6.7	6.7	-3.9	-3.9	-27.2	-18.6	81.5	19.8
Aluminum	16.8	9.3	36.2	1.0	1.0	-4.8	-4.8	0.3	7.2	4.8	-21.4
Copper (LME)	19.6	0.6	-4.9	-5.4	-5.4	-6.5	-6.5	-14.8	-1.8	2.6	-16.2
Zinc	26.7	1.7 -4.3	5.1	-10.4 -14.7	-10.4	-6.6	-6.6	-22.2	48.9	46.9	-15.9
NaturalGas Sugar	32.7 26.1	-1.0	-6.1 -3.5	5.1	-14.7 5.1	-11.4 -13.5	-11.4 -13.5	-17.9 -17.4	-18.0 -4.9	9.9 0.4	-29.4 -3.0
Gold	12.0	1.4	-2.0	-11.7	-11.7	-18.4	-18.4	-29.2	-24.1	-25.7	-26.3
Silver	20.7	5.2	4.4	-8.4	-8.4	-18.9	-18.9	-15.8	-24.3	-19.6	-35.9
Nickel	26.9	-1.9	-15.3	-5.6	-5.6	-22.5	-22.5	-22.1	-16.3	2.7	-24.1
Copper (COMEX)	18.5	4.7	-5.9	-15.3	-15.3	-23.2	-23.2	-14.9	-8.9	-12.7	-29.2
Palladium	21.9	-0.5	0.6	-12.8	-12.8	-26.5	-26.5	-23.4	-6.8	-12.1	-23.4
Platinum	15.4	-6.8	-12.1	-0.9	-0.9	-27.3	-27.3	-29.7	-11.9	-18.4	-29.0
BCOM 60 Day Historical Volatility							27.10				
Palladium	29.6	-3.5	-5.3	-8.2	-8.2	10.0	10.0	-19.5	20.5	101.8	0.7
Unlead Gas	34.8	-0.3	-0.6	25.6	25.6	7.4	7.4	-52.0	-28.6	47.7	29.3
Live Cattle	23.0	-2.7	-2.9	2.6	2.6	5.7	5.7	30.6	32.5	50.8	64.8
HRW Wheat	23.0	-2.7	-2.9	2.6	2.6	5.7	5.7	4.6	-16.9	-9.7	-22.2
Copper (CME)	22.0	-2.9	-2.4	-5.7	-5.7	-0.6	-0.6	0.6	-19.9	46.9	-9.5
Copper (LME)	22.6	0.2	-1.5	-7.9	-7.9	-2.5	-2.5	2.9	-15.8	35.5	-2.6
Nickel Gas	30.5	0.2	-1.0	1.1	1.1	-3.8	-3.8	-19.6	9.2	46.9	15.9
Sugar	24.8	-0.9	-9.9	-13.4	-13.4	-4.8	-4.8	-35.2	-9.9	-24.4	2.2
Soybeans	16.4	-2.9	-3.8	-11.0	-11.0	-5.1	-5.1	40.1	-15.7	-1.6	-9.9
Soybean Meal	20.5	-2.5	-3.5	-11.7	-11.7	-8.9	-8.9	32.3	-26.8	-10.0	-7.0
Wheat	24.9	-2.4	-2.3	-6.5	-6.5	-9.1	-9.1	26.3	-14.0	-14.0	-24.6
Aluminum	14.2	-0.1	0.1	-1.8	-1.8	-10.8	-10.8	-18.7	-24.4	-17.6	-38.5
Cotton	15.3	-8.0	-8.8	-2.8	-2.8	-10.8	-10.8	-13.2	-19.1	-25.2	-37.1
Soybean Oil	19.6	-0.9	-0.9	7.7	7.7	-21.4	-21.4	21.3	-13.8	11.5	9.0
Natural Gas	44.1	-0.3	-12.0	-22.0	-22.0	-22.5	-22.5	-10.4	-22.6	-40.6	-20.4
Gold	11.1	1.2	-4.0	-9.9	-9.9	-22.7	-22.7	-44.9	-30.4	-21.4	-39.2
Heating Oil	23.3	0.0	1.1	3.5	3.5	-26.5	-26.5	-59.1	-62.7	-7.1	40.7
Platinum	18.5	-0.1	-8.3	-25.9	-25.9	-27.9	-27.9	-33.1	2.2	44.1	-13.0
Corn	16.2	-1.0	-2.0	-10.3	-10.3	-28.9	-28.9	35.8	-27,4	-20.8	-39.8
Crude Oil	25.4	-0.1	0.7	5.9	5.9	-30.3	-30.3	-63.6	-55.9	52.4	23.8
Coffee	19.8	-5.3	-6.2	-15.5	-15.5	-31.4	-31.4	-32.1	-55.0	-63.7	-33.1
Zinc	23.9	0.0	-2.6	-18.2	-18.2	-32.5	-32.5	-23.8	22.4	46.7	-8.6
Gas Oil	22.0	0.4	2.0	-0.4	-0.4	-33.0	-33.0	-62.4	-34.8	57.0	46.4
Brent Crude	24.4	0.4	-0.6	2.6	2.6	-33.1	-33.1	-60,4	-53.5	85.6	42.5
Silver	16.8	-0.3	-4.9	-28.1	-28.1	-42.6	-42.6	-41.3	-47.6	-25.9	-52.7
Lean Hogs	26.2	-0.8	-5.5	-22.1	-22.1	-56.6	-56.6	9.5	-20.0	-12.5	73.7

Tables & Charts – March 2017 Edition

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

Name	Current	1 Yr Ago	1 Yr Change	Change	Change	1 Mth Change	3 Mth Change	2 Yr Change
■ 1 Year Spread % of First Contract	POSICION		Change	Change	Change	Change	Change	Change
■ BCOM	-2.7	-6.5	3.9	-0.3	-0.2	-0.2	-0.3	3.2
■ Sector	4-17	0.0	77.5	- MARK			100.00	200
■ Energy	0.2	-16.8	17.0	2.8	1.8	1.8	2.8	10.5
■ Precious Metals	-1.9	-1.0	-0.9	-0.2	-0.1	-0.1	-0.2	-1.2
■ Industrial Metals	-1.3	-1.2	0.0	-0.5	-0.4	-0.4	-0.5	-0.4
■ Agriculture	-6.0	-5.2	-0.8	-1.8	-1.2	-1.2	-1.8	1.5
■ Livestock	4.4	6.1	-1.7	-3.7	-1.4	-1.4	-3.7	8.6
■ Single Commodities	32.0	21.0	77.5	110000	97.15	***		0.0
Natural Gas	11.0	-34.9	45.9	11.1	11.1	11.1	11.1	24.5
Crude Oil	-2.7	-15.4	12.8	3.3	-0.6	-0.6	3.3	16.5
Cotton	3.8	-1.9	5.8	2.2	2.8	2.8	2.2	6.1
Brent Crude	-1.3	-14.4	13.1	1.8	-1.3	-1.3	1.8	12.5
Gas Oil	-3.2	-16.3	13.1	1.6	0.2	0.2	1.6	4.1
Heating Oil	-4.1	-16.6	12.5	0.4	-0.2	-0.2	0.4	3.5
Palladium	-0.3	-0.4	0.0	0.1	0.0	0.0	0.1	-0.1
Soybean Meal	-0.4	-3.1	2.7	0.0	-0.9	-0.9	0.0	-3.4
Gold	-1.6	-0.7	-0.9	-0.1	-0.1	-0.1	-0.1	-1.2
Platinum	-1.3	-0.5	-0.8	-0.1	-0.2	-0.2	-0.1	-0.9
Corn	-10.7	-8.2	-2.5	-0.2	-1.0	-1.0	-0.2	-0.8
Aluminum	-1.2	-3.3	2.1	-0.2	-0.2	-0.2	-0.2	1.3
Zinc	0.0	-0.9	0.9	-0.2	-0.9	-0.9	-0.2	1.5
Silver	-2.2	-1.4	-0.9	-0.3	-0.2	-0.2	-0.3	-1.1
Wheat	-17.4	-11.7	-5.7	-0.3	1.6	1.6	-0.3	-8.9
Nickel	-2.3	-1.7	-0.6	-0.4	-0.4	-0.4	-0.4	-0.9
Copper (LME)	-0.7	0.9	-1.6	-0.4	-0.3	-0.3	-0.4	-1.5
Coffee	-9.7	-6.7	-2.9	-0.5	-0.6	-0.6	-0.5	2.6
Unleaded Gas	1.4	-3.1	4.5	-1.4	1.5	1.5	-1.4	1.9
Copper (CME)	-2.2	-1.2	-1.1	-1.4	-0.4	-0.4	-1.4	-2.3
Soybean	-1.2	-2.0	0.8	-1.6	-1.3	-1.3	-1.6	-2.4
HRW Wheat	-18.2	-14.2	-4.0	-2.1	-2.7	-2.7	-2.1	-10.4

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.

i iistoi icai										
Name	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
■ 1 Year Spread % of First Contract						200				
₩ BCOM	-2.7	-2.3	-7.7	-4.8	0.6	-0.9	-1.9	2.1	-4.2	-14.0
■ Sector		200	WINGS !	1300	2000	23,000	200.000		440	
■ Livestock	4.4	8.1	0.6	8.3	4.1	-0.7	-0.2	-1.8	-4.8	-10.4
■ Energy	0.2	-2.6	-18.7	-13.5	3.7	-0.1	-1.9	-4.3	-9.7	-30.2
₩ Industrial Metals	-13	-0.8	-1.5	-0.8	-1.8	-2.5	-2.1	0.5	-2.3	-5.0
■ Precious Metals	-1.9	-1.7	-1.0	-0.8	-0.7	-0.7	-0.7	-0.9	-0.9	-0.6
■ Agriculture	-6.0	-4.2	-5.5	-5.6	-1.5	-2.3	-1.8	12.2	-0.3	-12.2
■ Single Commodities				Contract Contract	1.5					11411
Natural Gas	11.0	-0.1	-22.6	-22.2	-3.2	-20.7	-29.9	-18.4	-21.1	-31.6
Live Cattle	10.6	13.3	8.1	7.0	2.5	-3.3	-4.5	-3.8	-4.3	-5.6
Cotton	3.8	1.7	-2.7	-8,6	6.7	-5.7	3.6	34.6	-2.6	-18.5
Unleaded Gas	1.4	2.8	1.0	-12.3	7.0	9.8	7.9	3.7	-2.9	-30.8
Zinc	0.0	0.2	-2.8	-1.4	-2.3	-4.5	-3.9	-1.7	-3.2	-7.0
Palladium	-0.3	-0,5	-0.2	-0.1	-0.5	-0.2	-0.4	0.0	-0.3	-20.5
Soybean Meal	-0.4	-0.4	-5.7	9.8	19.9	12.5	-2.4	9.9	9,5	-1.9
Copper (LME)	-0.7	-0.3	0.3	1.6	1.1	-0.7	-0.3	2.7	-0.9	-3.0
Aluminum	-1.2	-1.0	-2.7	-3.1	-7.5	-5.0	-5.2	-2.3	-5.0	-9.5
Soybean	-1.2	0,4	-2.0	0.9	13.1	7.7	-1.2	5.9	1.7	-4.1
Platinum	-13	-1.1	-0.4	-0.4	-0.5	-0.7	-1.0	-0.5	-1.2	-54.1
Brent Crude	-13	-3.1	-22.1	-16.4	4.9	6.3	4.0	-0.4	-8.3	-35.3
Gold	-1.6	-1.5	-0.5	-0.3	-0.4	-0.7	-0.9	-0.9	-1.0	-0.9
Lean Hogs	-1.7	2.9	-7.0	9.6	5.7	2.0	4.2	0.2	-5.3	-15.2
Copper (CME)	-2.2	-0.8	-1.1	-0.2	13	-1.1	-0.8	2.5	-1.2	-2.6
Silver	-2.2	-2.0	-1.4	-1.2	-0.9	-0.7	-0.5	-0.9	-0.8	-0.4
Nickel	-23	-1.9	-1.4	-1.1	-1.8	-1.4	-0.1	1.1	-1.1	-3.0
Crude Oil	-2.7	-5.9	-20.4	-13.5	7.3	-1.3	1.4	-3.2	-6.7	-35.1
Gas Oil	-3.2	-4.8	-23.8	-12.0	3.1	2.9	3.0	-4.2	-11.0	-25.1
Soybean Oil	-3.4	-1.2	-3.1	-0.9	-3.8	-2.8	-1.6	-0.9	-5.3	-6.0
Heating Oil	-4.1	-4.5	-24.5	-4.5	3.2	2.1	2.1	-3.4	-8.0	-23.2
Sugar	-4.6	4.8	0.9	-13.1	-8.2	-5.5	-0.3	26.0	21.9	-19.3
Coffee	-9.7	-9.2	-8.4	-7.4	-11.2	-11.5	-4.9	6.1	-5.7	-10.8
Corn	-10.7	-10.5	-9.5	-8.1	-9.2	12.7	7.2	9.4	-8.5	-14.0
Wheat	-17.4	-17.1	-10.5	-5.0	-7.2	-6.9	-12.4	-8.7	-15.3	-12.5
HRW Wheat	-18.2	-16.1	-14.9	-6.3	-5.5	-5.7	-7.9	-3.1	-12.7	-10.6

Tables & Charts – March 2017 Edition

Curve Analysis – Gross Roll Yield Key Metrics

Name	Current 1Yr Yld	Yld 6 Months Ago	Yld 1 Yr Ago	from 1 Yr Ago	Yld 2 Yr Ago	from 2 Y
Sector Roll Yield		11.00				
BCOM Livestock	4.3	3.0	-0.5	4.8	-1.1	5.4
BCOM Precious Metals	-2.3	-1.0	-0.6	-1.7	-0.5	-1.8
BCOM Industrial Metals	-2.9	-2.3	-2.0	-0.9	-1.7	-1.2
BCOM Softs	-6.2	-6.6	-8.3	2.2	-7.8	1.6
BCOM Agriculture	-6.4	-5.5	-5.0	-1.3	-0.1	-6.2
всом	-9.8	-10.9	-7.6	-2.2	-1.7	-8.1
BCOM Energy	-23.0	-26.9	-15.8	-7.2	-2.4	-20.6
Commodities Roll Yield						
Platinum	-0.2	-0.1	-0.1	-0.1	-0.5	0.2
Gold	-0.8	-0.4	-0.2	-0.6	-0.3	-0.5
Sugar	-1.2	-3.5	-11.8	10.6	-13.6	12.4
Soybean Meal	-1.6	0.1	3.7	-5.2	21.2	-22.8
Silver	-1.6	-1.7	-1.1	-0.5	-1.1	-0.5
Copper (CME)	-1.8	-1.4	-0.8	-1.0	0.2	-2.0
Soybean	-1.9	-0.3	1.1	-3.0	11.6	-13.5
Nickel	-2.6	-2.4	-1.0	-1.7	-0.7	-1.9
Zinc	-3.6	-5.3	-2.3	-1.3	-3.0	-0.5
Cotton	-3.9	-2.7	-2.1	-1.8	7.3	-11.2
Corn	-4.4	-6.8	-9.6	5.2	-6.7	2.3
Aluminum	-4.7	-2.5	-4.2	-0.5	-5.5	0.8
Soybean Oil	-5.7	-6.2	-4.0	-1.7	-2.4	-3.3
Coffee	-9,8	-11.6	-9.5	-0.3	-6.4	-3.4
Lean Hogs	-10.6	-1.3	-5.5	-5.2	6.8	-17.4
Gas Oil	-13.0	-10.1	-7.6	-5.4	-3.1	-9.9
Unlead Gas	-13.7	-22.9	-3.4	-10.3	-3.4	-10.3
Heating Oil	-13.9	-15.2	-8.0	-5.8	1.6	-15.5
Wheat	-14.3	-7.3	-2.9	-11.4	-5.4	-8.9
HRW Wheat	-16.7	-12.9	-9.6	-7.1	-3.2	-13.4
Brent Crude	-19.6	-12.2	-10.0	-9.6	-3.1	-16.5
Crude Oil	-21.5	-30.1	-22.7	1.2	0.7	-22.3
Natural Gas	-47.0	-42.8	-21.8	-25.2	-5.4	-41.6

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

Name	20171	2016	2015	2014	2013	2012	2011	2010	2009	2008
Sector Roll Yield		11 18 11 18 11			1000		1.200100	12.02.00	100000	
BCOM Livestock	4.3	0.2	1.1	-0.2	-4.5	-9.8	-12.3	-14.8	-20.2	-22.5
BCOM Precious Metals	-2.3	-1.1	-0.6	-0.4	-0.5	-0.9	-0.6	-1.1	-1.1	-2.6
BCOM Industrial Metals	-2.9	-2.0	-1.8	-2.1	-3.9	-3.3	-2.2	-4.1	-16.7	-3.3
BCOM Softs	-6.2	-5.6	-7.4	-12.5	-4.9	0.9	9.0	0.5	-24.7	-18.2
BCOM Agriculture	-6.4	-7.0	-4.7	0.7	8.2	3.6	-5.8	-12.6	-2.5	-7.8
ВСОМ	-9.8	-11.4	-6.3	0.0	-0.9	-4.7	-6.6	-9.5	-21.8	-6.5
BCOM Energy	-23.0	-32.5	-12.6	1.6	-5.1	-11.7	-11.0	-13.8	-51.8	-5.6
Commodities Roll Yield									100000	
Live Cattle	2.9	8.0	1.0	-0.3	-6.8	-12.9	-11.1	-11.2	-10.9	-14.5
Platinum	-0.2	-0.4	-0.2	-0.5	-0.8	-1.2	0.9	-2.7	-6.2	-0.7
Gold	-0.8	-0.9	-0.4	-0.2	-0.4	-0.9	2.9	-1.0	-1.1	-1.6
Sugar	-1.2	-5.2	-9.9	-19.5	-4.1	3.1	18.7	4.6	-41.8	-28.3
Soybean Meal	-1.6	-0.5	9.6	28.7	16.5	13.0	-13	20.7	30.2	0.4
Silver	-1.6	-1.8	-1.2	-0.9	-0.7	-1.1	4.5	-5.1	-1.5	-1.1
Copper (CME)	-1.8	-1.6	-0.7	0.3	-1.7	-13	-0.1	-3.6	-7.1	0.5
Soybean	-1.9	0.2	-0.2	17.0	18.5	5.5	-1.8	0.5	16.1	-2.2
Nickel	-2.6	-1.7	0.5	-2.9	-2.3	-1.0	-1.7	-1.6	-7.3	-1.8
Zinc	-3.6	-2.7	-2.5	-4.6	-8.8	-3.1	-3.0	-5.3	-11.2	-2.6
Cotton	-3.9	-1.1	-2.1	7.7	-3.6	5.2	15.5	14.3	-24.1	-14.5
Corn	-4.4	-7.9	-9.6	-7.4	9.4	10.8	0.4	-20.9	-11.8	-11.0
Aluminum	-4.7	-2.9	-6.0	-9.1	-8.4	-6.2	-3.3	-6.0	-13.6	-5.0
Soybean Oil	-5.7	-5.4	-3.2	-2.9	-1.3	-4.2	-4.2	-8.5	-6.9	-4.3
Coffee	-9.8	-9.7	-7.8	-12.6	-7.2	-5.0	-3.4	-8.5	-11.1	-85
Lean Hogs	-10.6	-13.6	0.3	0.6	-1.7	-4.5	-9.6	-23.8	-30,8	-38.1
Gas Oil	-13.0	-22.7	-11.0	-1.6	2.1	7.4	2.1	-12.3	-20.5	-3.0
Unlead Gas	-13.7	-27.2	1.1	4.7	1.3	18.9	4.5	-6.9	-16.9	-2.0
Heating Oil	-13.9	-25,3	-3.0	1.1	-1.3	1.0	-2.9	-11.7	-25.3	-0.3
Wheat	-14.3	-10.9	-1.9	-7.0	-5.1	-9.4	-14.6	-23.8	-14.7	-7.1
HRW Wheat	-16.7	-14.7	-7.6	-2.5	-3.3	-4.1	-7.6	-9.9	-4.7	-4.7
Brent Crude	-19.6	-27.7	-23.3	0.3	6.9	4.2	8.3	-12.5	-55.6	-3.1
Crude Oil	-21.5	-38.2	-14.0	43	-0.3	-4.5	-9.7	-11.3	-70.3	0.3
Natural Gas	-47.0	-52.6	-19.8	8.0	-22.3	-42.7	-13.8	-16.1	-47.6	-11.8

Tables & Charts – March 2017 Edition

Curve Analysis – Forwards / Forecasts Spread %

Name	3/2017	2/2017	1/2017	12/2016	11/2016	10/2016	9/2016	8/2016	7/2016	6/2016	5/2016	4/2016
■ 1 Yr Spread ((Forward-Forecast)/ Forec												
■ Energy												
Natural Gas Spread %	6.0	-4.5	2.9	49.0	34.1	25.1	26.6	26.7	28.6	12.2	3.8	4.7
WTI Crude Spread %	-4.7	-0.5	-0.7	24.3	15.5	9.9	13.8	6.3	-1.9	3.1	9.2	9.4
Brent Crude Spread %	-3.2	1.5	0.5	26.6	143	9.8	12.8	62	-1.8	2.8	5.7	9.2
ULS Diesel Spread %	-4.6	1.2	-0.2	27.0	18.3	13.3	16.1	8.6	1.9	5.6	7.8	12.1
Unleaded Gasoline Spread %	-4.1	-1.4	-0.5	19.8	7.2	3.0	4.6	-3.5	-12.0	-2.3	0.0	9.6
■ Soft												
Sugar Spread %	-6.7	0.2	4.1	8.4	10.1	20.8	33.9	19.5	16.6	13.0	14.6	8.9
Coffee Spread %	-3.2	-2.2	3.2	0.0	10.3	22.8	15.1	12.4	16.9	7.3	-1.6	-3.4
Cotton Spread %	5.8	7.1	5.7	8.3	12.8	7.8	7.5	4.0	18.0	0.3	-0.2	-0.8
■ Industrial Metals												
Copper Spread %	3.5	10.5	13.4	14.5	22.2	2.0	2.3	-3.7	2.6	-0.2	-3.5	2.3
Aluminum Spread %	11.7	12.1	8.7	5.9	9.2	9.3	5.3	1.0	5.0	2.5	-0.6	4.8
Zinc Spread %	6.0	10.2	15.3	25.5	34.3	22.5	19.2	16.8	18.4	5.1	1.9	4.9
Nickel Spread %	-5.6	0.4	-9.5	4.0	19.5	11.4	12.7	3.7	17.2	0.6	-6.1	1.6
■ Precious Metals												
Gold Spread %	0.5	1.1	-3.0	-8.7	-8.2	-0.3	2.9	2.3	6.2	3.3	-0.2	7.5
Silver Spread %	5.9	6.9	-2.7	-6.6	-6.4	1.4	9.6	6.1	19.9	6.0	1.4	13.1
■ Grain												
Corn Spread %	-0.5	2.8	1.5	-1.9	-5.8	-0.6	-4.5	-13.7	-10.3	-1.8	4.2	3.1
Soybeans Spread %	-2.4	3.2	2.4	0.8	4.8	2.2	-2.7	-4.3	-13	93	9.0	8.9
Wheat Spread %	-0.4	5.3	0.6	-7.9	-13.4	-5.9	-9.4	-16.2	-9.1	-3.6	-2.3	2.6

Data Set

Name	3/2017	2/2017	1/2017	12/2016	11/2016	10/2016	9/2016	8/2016	7/2016	6/2016	5/2016	4/2016
■ 1 Yr Spread												
■ Energy												
Natural Gas Forward	3.3	3.1	3.3	3.7	3.4	3.1	3.1	3.1	3.1	2.6	2.4	2.4
Natural Gas Forecast	3.1	3.2	3.2	2.5	2.5	2.5	2.5	2.5	2.4	2.3	2.3	2.3
WTI Crude Forward	51.5	54.7	54.5	53.7	49.7	47.3	48.9	45.7	43.2	44.9	45.2	43.6
WTI Crude Forecast	54.0	55.0	54.9	43.2	43.0	43.0	43.0	43.0	44.0	43.6	41.4	39.9
Brent Crude Forward	53.9	56.7	56.3	56.8	51.2	48.7	50.3	47.4	44.2	46.0	46.1	44.8
Brent Crude Forecast	55.6	55.9	56.0	44.9	44.8	44,4	44.6	44.6	45.0	44.8	43.7	41.0
ULS Diesel Forward	1.6	1.7	1.7	1.7	1.6	1.5	1.5	1.4	1.3	1.4	1.4	1.3
ULS Diesel Forecast	1.7	1.7	1.7	13	1.3	13	13	1.3	13	1.3	1.3	1.2
Unleaded Gasoline Forward	1.6	1.7	1.7	1.7	1.5	1.4	1.5	13	1.3	1.4	1.4	1.4
Unleaded Gasoline Forecast	1.6	1.7	1.7	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3
■ Soft	340	***	***	355	415	100		445	1,000	1,000	444	
Sugar Forward	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Sugar Forecast	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
Coffee Forward	1.4	1.5	1.5	1.4	1.5	1.6	1.5	1.5	1.5	1.4	1.2	1.2
Coffee Forecast	1.5	15	1.5	1.4	1.3	1.3	13	1.3	1.3	1.3	13	1.3
Cotton Forward	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6
Cotton Forward Cotton Forecast	0.7	0.7	0.7	0.7	3.75	1,70,710		1000	1.00		1,000	-
	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
■ Industrial Hetals												
Copper Forward	5,936.0	5,958.0	5,980.9	5,526.0	5,815.3	4,847.6	4,861.5	4,614.1	4,925.8	4,778.3	4,6913	4,943.6
Copper Forecast	5,737.5	5,391.5	5,275.0	4,825.5	4,760.0	4,752.0	4,750.0	4,792.0	4,800.0	4,790.0	4,861.5	4,831.5
Aluminum Forward	1,945.3	1,912.5	1,821.4	1,694.0	1,732.3	1,733.9	1,670.5	1,609.3	1,644,6	1,598.4	1,548.4	1,630.5
Aluminum Forecast	1,741.0	1,706.5	1,675.0	1,600.0	1,586.8	1,586.8	1,586.4	1,594.0	1,566.0	1,559.5	1,558.0	1,555.5
Zinc Forward	2,850.2	2,816.9	2,850.0	2,563.5	2,692.3	2,456.6	2,376.1	2,311.6	2,244.9	1,956.5	1,855.3	1,871.1
Zinc Forecast	2,690.1	2,557.0	2,472.0	2,043.0	2,005.0	2,005.0	1,993.5	1,979.0	1,895.5	1,862.0	1,821.0	1,783.0
Nickel Forward	10,202.7	10,909.1	10,010.6	9,975.0	11,213.6	10,450.8	10,557.9	9,750.7	10,630,0	9,069.3	8,517.1	9,184.5
Nickel Forecast	10,806.2	10,871.0	11,063.0	9,594.0	9,385.0	9,385.0	9,367.0	9,404.0	9,069.0	9,019.0	9,072.0	9,041.5
■ Precious Metals												
Gold Forward	1,244.3	1,253.0	1,215.2	1,151.7	1,170.9	1,273.3	1,315.3	1,309.8	1,353.3	1,274.2	1,216.5	1,263.0
Gold Forecast	1,237.6	1,239.6	1,253.0	1,262.0	1,276.0	1,277.0	1,278.5	1,280.0	1,274.0	1,233.0	1,219.0	1,175.0
Silver Forward	18.1	18.4	17.6	16.0	16,4	17.8	19.2	18.7	20.4	17.3	15.9	17.0
Silver Forecast	17.1	17.2	18.1	17.1	17.5	17.5	17.5	17.6	17.0	16.3	15.6	15.1
Platinum Forecast	1,008.0	1,018.5	1,025.0	1,000.0	1,013.0	1,013.0	1,016.5	1,006.5	998.0	990.0	990.0	970.0
Palladium Forecast	742.5	725.0	725.0	616.6	610.0	610.0	610.0	598.0	580.0	580.0	590.0	585.0
■ Grain		2.0	1000	2.5				-	2.4	-	2.0	2.0
Corn Forward	3.7	3.8	3.8	3.5	3,4	3.6	3.4	3.1	3.4	3.7	3.9	3.8
Corn Forecast	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.6	3.8	3.8	3.8	3.7 9.8
Soybeans Forward	9.8	10.3	10.2	10.0	10.3	10.1	9.6	9.0	10.1	10.7	10.1	
Soybeans Forecast Wheat Forward	10.1	10.0	10.0	4.1	3,8	9.9	9.8	3.8	10.3	9,8	9.3	9.0
	45		45	4.4	4.4	4.2	4.1	4.5	4.7	4.8	4.9	4.9
Wheat Forecast	4.5	4.4	4.5	9.0	2.4	4.5	4.5	4.5	9.7	4,8	4,9	4,8

Tables & Charts – March 2017 Edition

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)				51			
■ Single Commodities			14 14 15 15				
Palladium	33	17.9	37.5	37.5	50.0	3.1	38
Live Cattle	391	19.2	27.8	27.8	33.9	41.2	391
Silver	208	4.0	26.8	26.8	17.5	22.4	225
Copper (CME)	275	2.6	22.8	22.8	44.7	61.8	301
Corn	1,446	7.8	17.0	17.0	8.6	8.2	1,522
Cotton	280	6.1	15.7	15.7	28.4	53.0	288
Gas Oil	926	-4.4	15.5	15.5	21.4	36.0	987
Brent Crude	2,472	2.2	14.5	14.5	14.2	26.9	2,476
Soybean Meal	372	2.5	13.1	13.1	-0.3	9.4	431
Wheat	506	25.9	13.0	13.0	17.4	16.6	514
Soybean	707	5.1	11.9	11.9	-7.0	-6.0	896
Natural Gas	1,375	5.1	10.6	10.6	27.1	39.3	1,382
Crude Oil	2,214	4.5	8.0	8.0	26.7	27.6	2,240
Soybean Oil	397	7.3	6.7	6.7	-11.6	4.5	479
Zinc	194	-3.0	5.4	5.4	25.2	12.1	224
Lean Hogs	204	-7.3	5.2	5.2	-12.5	-6.9	267
HRW Wheat	248	19.8	3.8	3.8	19.2	60.0	274
Gold	429	-5.1	3.1	3.1	-8.7	10.6	658
Sugar	811	5.1	0.8	0.8	-6.8	-10.0	940
Nickel	161	0.0	0.6	0.6	4.6	21.1	188
Platinum	63	-11.3	0.0	0.0	8.6	-10.0	84
Coffee	191	8.5	0.0	0.0	-3.5	-5.5	228
Heating Oil	419	2.0	-2.3	-2.3	12.3	14.5	446
Copper (LME)	204	-0.5	-2.4	-2.4	15.3	12.7	234
Unlead Gas	385	-2.5	-3.8	-3.8	-5.2	-1.0	444
Aluminum	520	4.4	-3.9	-3.9	-1.1	-13.2	667

Name	20171	2016	2015	2014	2013	2012	2011	2010	2009	2008
■ Open Interest (Aggregate - 1,000s)	10.00	10000000	April Care	0.1716.21	1	400000	112000	11000-0	1000000000	
₩ BCOM	14,203	12,965	11,965	10,881	11,033	10,367	9,282	10,206	8,524	6,715
■ Sector				-112-12-	1,117,242.2	- 10.00	1100000			
■ Energy	6,865	6,282	5,357	4,598	4,868	4,468	3,772	3,643	3,167	2,880
■ Agriculture	4,958	4,493	4,563	4,211	4,090	3,876	3,418	4,399	3,447	2,352
■ Industrial Metals	1,353	1,319	1,178	1,224	1,104	1,006	1,159	1,105	1,016	861
■ Precious Metals	700	643	649	587	574	629	567	760	646	411
# Livestock	595	501	431	481	591	578	552	534	443	369
■ Single Commodities										
Brent Crude	2,472	2,159	2,031	1,513	1,443	1,285	886	873	728	595
Crude Oil	2,214	2,051	1,671	1,468	1,616	1,473	1,328	1,430	1,193	1,189
Corn	1,446	1,236	1,334	1,237	1,203	1,128	1,151	1,549	1,002	810
Natural Gas	1,375	1,243	957	939	1,291	1,165	1,011	772	708	680
Sugar	811	805	879	836	830	754	559	613	834	357
Soybean	707	632	646	599	576	546	460	629	418	278
Aluminum	520	541	551	595	539	495	682	546	487	474
Wheat	506	448	368	371	411	456	384	492	362	251
Gold	429	416	415	372	380	428	419	585	490	307
Heating Oil	419	429	342	346	279	263	269	301	304	225
Soybean Oil	397	372	384	355	340	306	273	358	211	208
Live Cattle	391	306	265	266	327	329	317	327	265	213
Unlead Gas	385	400	355	332	239	282	277	267	235	191
Soybean Meal	372	329	402	341	262	212	194	192	162	116
Cotton	280	242	185	178	172	171	152	207	187	126
Copper (CME)	275	224	166	160	167	147	121	167	155	75
HRW Wheat	248	239	193	132	154	158	139	219	145	83
Silver	208	164	168	151	132	141	106	136	124	86
Lean Hogs	204	194	166	215	264	248	235	207	178	156
Copper (LME)	204	209	146	155	132	130	143	196	163	140
Zinc	194	184	167	182	184	166	148	135	149	125
Coffee	191	191	172	160	142	144	105	140	126	123
Nickel	161	160	148	132	81	69	65	61	62	47
Platinum	63	63	65	64	62	60	42	39	33	18

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Market Flows – Commitment of Traders

Key Metrics

Name	Current	5 Day Change	1 Mth Change	3 Mth Change	Change	1 Yr Change	2 Yr Change
■ Net - Managed Money Total/Disagg			11 11 11				
■ Single Commodities				20.000			
Gold	99,150	50	-19	140	57,903	-40	117
Aluminum	194,479	4	9	21	48,689	380	123
Silver	81,601	25	-3	109	42,503	90	173
Cotton	105,442	0	6	39	29,390	889	231
Live Cattle	119,382	10	22	29	26,866	276	78
Soybean Meal	29,533	-50	-58	51	9,996	324	106
Palladium	21,942	15	29	72	9,200	190	41
Platinum	8,009	-22	-74	-3	-214	-47	-47
Zinc	78,013	-3	-12	-8	-3,026	52	85
Copper (LME)	57,213	-5	-19	-16	-10,171	25	95
HRW Wheat	-1,756	-112	-105	-119	-10,841	84	-133
Copper (CME)	60,773	11	-14	-16	-11,358	188	256
Coffee	-1,592	-123	-111	-113	-14,298	-106	84
Heating Oil	19,034	-2	-42	-43	-14,507	214	173
Lean Hogs	38,514	-16	-28	-29	-16,021	-27	257
Natural Gas	149,557	9	91	-14	-24,486	265	236
Wheat	-136,150	-13	-145	-25	-27,223	-95	-93
Nickel	27,523	-10	-26	-52	-29,709	18	39
Gasoline	18,023	-14	-54	-64	-32,068	-43	-25
Corn	-155,512	-90	-289	-37	-41,864	-43	-1,918
WTI Crude	244,615	-6	-37	-21	-63,294	11	50
Soybeans	37,916	-42	-71	-65	-69,159	-50	182
Brent Crude	372,756	-7	-21	-18	-81,829	4	70
Sugar	56,417	-16	-59	-59	-82,025	-65	149
Soybean Oil	-19,748	22	-173	-123	-105,270	-119	-914

Name	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
■ Net - Managed Money Total/Disagg				100				1000		
■ BCOM	1.4M	1.8M	107,932.0	1.1M	835,105.0	791,313.0	637,042.0	1.6M	1.1M	263,141.0
■ Sector	CONTRACTOR OF			Service Co.				100000000		
■ Energy	832,927.0	1.0M	95,835.0	278,790.0	623,230.0	258,739.0	230,666.0	224,236.0	185,192.0	38,894.0
 Industrial Metals 	418,461	423,576	90,351	218,292	35,635	14,988	-4,018	39,105	15,752	-17,586
■ Precious Metals	210,702	101,310	-239	153,310	70,026	171,032	134,710	232,650	252,599	118,482
■ Livestock	157,896	147,051	24,525	117,295	137,611	110,898	104,018	133,520	83,521	9,221
■ Agriculture	-85,450	225,844	-75,733	383,375	-1,048	281,653	188,257	962,170	594,114	119,945
■ Single Commodities				100000000000000000000000000000000000000						
Brent Crude	401,698	454,585	163,672	115,571	136,611	125,397	81,537			
WTI Crude	244,615	307,909	100,797	199,388	270,386	134,834	192,466	217,046	133,742	82,331
Aluminum	194,479	145,790	71,738	118,175						
Natural Gas	149,557	174,043	-161,686	-53,308	134,994	-89,820	-124,269	-96,119	-27,225	-85,920
Live Cattle	119,382	92,516	11,081	80,102	96,771	59,569	68,105	104,412	49,281	16,394
Cotton	105,442	76,052	51,307	11,005	43,288	25,828	6,683	40,645	61,292	5,638
Gold	99,150	41,247	-24,263	98,391	34,104	101,922	111,919	169,987	197,560	100,925
Silver	81,601	39,098	6,282	17,051	5,573	23,113	6,200	26,836	26,631	11,742
Zinc	78,473	81,039	20,140	49,726		1111111111111111				
Copper (CME)	60,773	72,131	-25,964	-4,455	35,635	14,988	-4,018	39,105	15,752	-17,586
Copper (LME)	57,213	67,384	9,065	25,215						
Sugar	56,417	138,442	165,810	-66,824	-25,626	19,000	43,792	141,534	167,357	52,014
Lean Hogs	38,514	54,535	13,444	37,193	40,840	51,329	35,913	29,108	34,240	-7,173
Soybeans	37,916	107,075	-63,515	39,446	136,683	109,007	23,683	164,287	69,606	31,518
Soybean Meal	29,533	19,537	-40,843	54,132	57,931	41,489	-15,232	40,129	35,586	7,668
Nickel	27,523	57,232	15,372	29,631	0.00041010		- CONTRACTOR		1000000	-
Palladium	21,942	12,742	8,690	19,970	15,660	16,769	5,212	13,034	11,626	
Heating Oil	19,034	33,541	-35,339	-27,087	26,602	23,945	19,644	36,104	27,912	146
Gasoline	18,023	50,091	28,391	44,226	54,637	64,383	61,288	67,205	50,763	42,337
Platinum	8,009	8,223	9,052	17,898	14,689	29,228				5,815
Coffee	-1,592	12,706	-15,181		-8,417	-23,076			23,630	-16,072
HRW Wheat	-1,756	9,085	-14,975	24,999	8,022	23,619				8,438
Soybean Oil	-19,748	85,522	60,895		-46,649					-7,171
Wheat	-136,150	-108,927	-83,120	20,481	-71,468	-11,899				9,118
Corn	-155,512	-113,648	-136,111	239,704	-94,812	140,109	148,653	396,782	205,427	28,794

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Market Flows – ETF Flows (annual)

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Name	2017↑	2016	2015	2014	2013	2012	2011	2010	2009	2008
■ ETFs (\$ Billion AUM)										
■ Total ETF Assets Under Management (\$	176.66	163.09	119.31	113.28	127.10	226.76	201.40	189.73	118.83	55.75
■ Precious Metals	143.53	130.13	93.08	87.26	97.82	191.77	168.93	152.12	84.90	43.48
■ Broad Commodity	17.31	16.69	12.20	16.57	20.53	23.19	20.90	20.12	15.01	5.56
■ Energy	12.44	13.04	11.49	5.78	4.89	7.13	6.27	10.30	12.72	4.67
■ Agriculture	1.93	2.00	1.90	2.49	2.73	3.31	4.14	5.56	4.84	1.85
■ Industrial Metals	1.41	1.18	0.62	1.14	1.08	1.31	1.07	1.56	1.27	0.10
▼ Livestock	0.03	0.04	0.02	0.03	0.05	0.06	0.10	0.06	0.10	0.09
■ ETFs Fund Flows (\$ Billion)										
■ Total ETF Fund Flows (\$ Billion)	5.95	24.61	9.59	1.39	-43.36	20.97	5.24	18.46	39.53	15.66
■ Precious Metals	4.07	23.49	-3.90	-3.79	-39.82	19.30	9.45	17.14	21.52	9.41
■ Energy	1.17	-1.79	13.81	3.80	-3.10	1.72	-2.71	-0.50	8.17	4.73
■ Broad Commodity	0.47	2.40	0.00	1.46	-0.35	0.53	-0.89	2.23	6.48	0.91
■ Industrial Metals	0.14	0.34	-0.18	0.19	-0.09	0.25	-0.09	0.15	0.73	0.04
■ Agriculture	0.11	0.16	-0.13	-0.26	0.01	-0.80	-0.56	-0.52	2.61	0.43
■ Livestock	0.00	0.02	-0.01	-0.02	-0.01	-0.03	0.04	-0.04	0.02	0.14
DELTA WEIGHTED:										
■ ETFs (\$ Billion AUM) (DW)										
■ Total ETF Assets Under Management (\$	182.31	165.40	120.63	113.61	126.21	228.61	201.80	191.49	120.11	56.24
■ Precious Metals	144.83	130.81	93.03	87.39	98.04	193.28	169.39	153.02	85.19	43.80
■ Broad Commodity	17.31	16.69	12.20	16.57	20.53	23.19	20.90	20.12	15.01	5.56
■ Energy	16.73	14.60	12.78	5.92	3.71	7.40	6.14	11.12	13.68	4.83
■ Agriculture	1.98	2.06	1.97	2.54	2.80	3.36	4.20	5.60	4.86	1.85
■ Industrial Metals	1.43	1.20	0.63	1.15	1.09	1.31	1.08	1.56	1.27	0.10
■ Livestock	0.03	0.04	0.02	0.03	0.05	0.06	0.10	0.06	0.10	0.09
■ ETFs Fund Flows (\$ Billion) (DW)										
■ Total ETF Fund Flows (\$ Billion)	7.86	20.37	19.14	7.35	-44.70	23.07	5.27	18.96	40.58	16.88
■ Precious Metals	4.00	23.75	-3.59	-3.19	-38.99	20.11	9.29	16.75	21.66	9.45
■ Energy	3.15	-6.30	23.01	9.20	-5.31	3.01	-2.59	0.40	9.06	5.91
■ Broad Commodity	0.47	2.40	0.00	1.46	-0.35	0.53	-0.89	2.23	6.48	0.91
■ Industrial Metals	0.14	0.34	-0.17	0.19	-0.08	0.25	-0.09	0.15	0.74	0.04
■ Agriculture	0.11	0.16	-0.09	-0.29	0.06	-0.81	-0.49	-0.53	2.63	0.43
■ Livestock	0.00	0.02	-0.01	-0.02	-0.01	-0.03	0.04	-0.04	0.02	0.14

Monthly

Name	3/2017†	2/2017	1/2017	12/2016	11/2016	10/2016	9/2016	8/2016	7/2016	6/2016	5/2016	4/2016	3/2016
■ ETFs (\$ Billion AUM)													
■ Total ETF Assets Under Management (175,80	177.99	168.58	161.81	168.20	181.31	190.94	183.90	187.43	182.14	161.28	165.25	155.47
■ Precious Metals	142.68	144.47	135.49	129.65	134.92	149.96	157.69	152.11	155.71	149.01	128.81	133.67	127.15
■ Broad Commodity	17.31	17.53	17.21	16.13	15.44	15.44	15.98	15.79	16.24	15.74	14.83	13.94	12.31
■ Energy	12.43	12.48	12.53	12.98	14.72	12.79	14.16	12.97	12.37	14.43	14.74	14.84	13.54
■ Agriculture	1.93	2.08	2.00	1.86	1.91	2.07	2.14	2.08	2.12	2.20	2.17	2.00	1.85
■ Industrial Metals	1.41	1.39	1.33	1.16	1.18	1.04	0.95	0.94	0.97	0.75	0.72	0.79	0.62
■ Livestock	0.03	0.03	0.04	0.04	0.03	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
■ ETFs Fund Flows (\$ Billion)													
■ Total ETF Fund Flows (\$ Billion)	0.74	4.23	0.98	-6.93	-3.64	0.55	1.43	0.59	6.12	5.96	4.02	-0.48	2.87
₩ Energy	0.64	0.18	0.35	-3.49	125	-0.89	0.29	-0.53	0.85	-0.13	-1.07	-1.34	-121
■ Precious Metals	0.11	3.68	0.29	-3.88	-4.67	1.35	1.61	1.41	3.78	5.74	4.17	0.36	3.66
■ Broad Commodity	0.03	0.25	0.19	0.44	-0.17	0.00	-0.45	-0.33	1.25	0.40	0.79	0.29	0.37
■ Industrial Metals	0.03	0.04	80.0	0.02	0.03	0.07	-0.03	0.01	0.19	-0.02	-0.01	0.12	0.00
■ Livestock	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
■ Agriculture	-0.06	0.09	80.0	-0.01	-0.09	0.01	0.01	0.04	0.05	-0.04	0.13	0.09	0.05
DELTA WEIGHTED:													
■ ETFs (\$ Billion AUM) (DW)													
■ Total ETF Assets Under Management (179,16	181.33	171.70	164.20	173.21	184.44	194.79	186,41	190.47	186.43	164.26	168.30	157.03
₩ Precious Metals	143.65	145.57	136.44	130.29	135.54	150.88	158.71	153.03	156.97	150.06	129.27	134.47	127.55
■ Broad Commodity	17.31	17.53	17.21	16.13	15.44	15.44	15.98	15.79	16.24	15.74	14.83	13.94	12.31
■ Energy	14.72	14.63	14.60	14.67	19.03	14.91	16.91	14.49	14.07	17.59	17.19	17.01	14.61
■ Agriculture	2.02	2.16	2.08	1.92	1.97	2.14	2.21	2.14	2.19	2.26	2.23	2.06	1.92
■ Industrial Metals	1.43	1.41	135	1.17	1.20	1.06	0.97	0.95	0.99	0.77	0.73	0.81	0.63
■ Livestock	0.03	0.03	0.04	0.04	0.03	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
■ ETFs Fund Flows (\$ Billion) (DW)													
■ Total ETF Fund Flows (\$ Billion)	0.84	4.92	2.68	-10.58	-1.92	0.96	1.56	-1.13	7.79	6.59	3.27	-3.34	1.25
# Energy	0.81	0.90	2.00	-7.26	2.93	-0.72	0.41	-2.28	2.61	0.42	-1.86	-4.14	-2.74
Broad Commodity	0.03	0.70	0.19	0.44	-0.17	0.00	-0.45	-0.33	1.25	0.40	0.79	0.29	0.37
Industrial Metals	0.03	0.03	0.08	0.02	0.03	0.07	-0.03	0.00	0.19	-0.02	-0.01	0.13	0.00
Precious Metals	0.03	3.63	0.33	-3.77	-4.63	1.59	1.61	1.44	3.67	5.83	4.21	0.13	3.58
# Livestock	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
# Agriculture	-0.06	0.10	0.09	-0.01	-0.08	0.01	0.01	0.04	0.06	-0.05	0.13	0.00	0.04

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Broad Commodities

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Oil's decline	EXT5
Oil versus inflation expectations	<u>SWIF</u>

Metals

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

Agriculture

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

BCOM QUICK FACTS Index Methodology

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

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