



ARC Commodity Factor Risk Model

Monthly Report September 2026

September at a Glance

- **Reversal month; only Energy held up.** Metals -6.2% and Agriculture -2.1% ended the two-month run of broad gains. Energy edged up 1.3%, the only headline sector positive for the month, and BCOM finished roughly flat at +0.3%.
- **Refined Products pull further away.** Up another 6.2% in September and now +53.7% YTD against +0.7% for Crude Oil. Part of that gap is curve depth (124 maturities for CL, 28 for RB), but on front months RBOB is +90.1% YTD against WTI +57.5%, and the gasoline crack has tripled to about \$47 a barrel. Still the largest dislocation in the model.
- **Precious Metals give back August.** The month's weakest sub-sector return at -8.5%, wiping out last month's +7.2% rebound and falling back to -5.8% YTD. Base Metals lost 2.9%, a second straight decline, but stay +9.0% YTD.
- **Tilted Portfolios:** High Basis (-5.5%) and Low Trading Activity (-1.4%) gave back part of last month's outsized gains, and four of the five tilts fell. Low Basis (+0.9%) was the only gainer and extended its YTD lead at +33.0% versus BCOM's +29.3%.
- **Momentum is now the largest risk driver.** Ex-ante volatility stands at 24.9% for BCOM and 28.4% for GSCI. Momentum contributes 6.2 and 8.2 points respectively, ahead of Volatility and Open Interest, while the three sector factors together account for under 7 points on either index.
- **Inflation.** For September, our model points to an increase in the month-over-month CPI print and an increase in year-over-year inflation.



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Sectors and Factors Performance Report:

Sectors	September 2026 (MTD)	YTD 2026	5-Yr Return*
Agriculture	-2.1%	8.1%	3.7%
Grain And Oilseed	-2.1%	17.4%	1.8%
Lumber And Pulp	-4.9%	-12.3%	-14.2%
Proteins	0.3%	-8.1%	8.6%
Softs	-2.8%	0.3%	1.5%
Energy	1.3%	13.4%	1.9%
Crude Oil	1.4%	0.7%	-2.1%
Natural Gas	-1.3%	5.1%	3.2%
Refined Products	6.2%	53.7%	9.7%
Metals	-6.2%	0.3%	13.6%
Base	-2.9%	9.0%	8.4%
Precious	-8.5%	-5.8%	19.3%

Table 1: Sectors and Subsectors Performance

**Annualized over the trailing 5 years.*



Energy rose 1.3%, the only headline sector to gain in September, but the month was uneven across the complex: Refined Products +6.2%, Crude Oil +1.4%, Natural Gas -1.3%. Crude is back to positive on the year (+0.7%) and Refined Products are +53.7% YTD. On front-month contracts the picture is the same: RBOB +90.1% YTD against WTI +57.5%, with the gasoline crack up from roughly \$15 to \$47 a barrel since year-end. The dislocation we have tracked since the spring widened again and remains the largest in the model.

Agriculture fell 2.1% in September, with three of four sub-sectors down. Grain and Oilseed gave back 2.1% but remained the strongest agricultural sub-sector on the year at +17.4%. Softs slipped 2.8% and are now roughly flat year-to-date (+0.3%). Proteins (+0.3%) were the only agricultural sub-sector to gain, trimming their YTD loss to -8.1%.

Metals lost 6.2%, the largest sector move of the month in either direction. Precious Metals fell 8.5%, more than reversing August's +7.2% rebound and dropping back to -5.8% year-to-date. Base Metals fell 2.9%, a second straight monthly loss, but remain comfortably positive at +9.0% YTD and continue to lead the complex.

Table 2. Styles/Trading Factors Performance

Factor	September 2026 (MTD)	YTD 2026	5-Yr Return*	5-Yr Volatility*
Basis	2.8%	-1.3%	-6.5%	4.5%
Open Interest	-0.4%	3.8%	1.6%	4.2%
Momentum	0.6%	-5.3%	1.1%	8.7%
ST Momentum	-0.6%	1.0%	-6.8%	5.3%
Trading Activity	0.7%	2.2%	-0.8%	2.4%
Volatility	0.3%	-10.0%	-0.5%	9.4%
ST Volatility	-1.2%	4.4%	-0.8%	7.8%



**Trailing 5 years. Factor-replicating portfolios are long/short theoretical constructs spanning nearly all instruments in the model universe; they are not directly tradable.*

Basis was September's strongest factor at +2.8%, cutting its year-to-date loss to -1.3%, though it remains structurally negative over 5 years (-6.5%). Trading Activity (+0.7%, +2.2% YTD), Momentum (+0.6%, -5.3% YTD), and Volatility (+0.3%, -10.0% YTD) were marginally positive; Volatility is still the weakest factor of 2026 by a wide margin. The short-term factors reversed August's gains, with ST Volatility -1.2% (+4.4% YTD) and ST Momentum -0.6% (+1.0% YTD). Open Interest slipped 0.4% (+3.8% YTD).

Factor Tilted Portfolios Performance Report:

As shown above there are some clear patterns emerging for the ARC Commodity Styles and Trading Factors. However in order to take advantage of these trends, ARC has created liquid long-only tilted versions. Our findings, based on 25 years of data, are:

- Low Volatility, Low Basis (Extreme Backwardation) are reliable and produce better performance and risk than traditional indices. High Momentum has been the best risk adjusted performer over the last 5 years.
- High Basis and Low Trading Activity are reliable in underperforming the indices

Table 3: Top 5 Futures Tilted Portfolios and BCOM Performance

Return/Risk	Low Vol	Low Basis	High Mom	High Basis	Low TA	BCOM
September 2026	-3.1%	0.9%	-0.8%	-5.5%	-1.4%	0.3%
YTD	20.9%	33.0%	20.1%	21.6%	19.4%	29.3%
Annualized	10.3%	11.0%	26.7%	3.7%	2.5%	7.1%
Volatility	10.5%	15.2%	17.5%	13.3%	16.2%	15.5%
Sharpe	1.0	0.7	1.5	0.3	0.2	0.5

**Trailing 5 years, annualized. Sharpe ratios are computed without a risk-free adjustment. Tilted-portfolio results are hypothetical model performance, gross of fees and costs*



Four of the five tilts fell in September, and the August leaders led the way down: High Basis (-5.5%) and Low Trading Activity (-1.4%) gave back part of their outsized August gains, with Low Volatility (-3.1%) and High Momentum (-0.8%) also lower against a roughly flat BCOM (+0.3%). Low Basis (+0.9%) was the only gainer and extended its year-to-date lead to +33.0%, still the only tilt ahead of BCOM (+29.3%) on the year; High Basis (+21.6%), Low Volatility (+20.9%), High Momentum (+20.1%), and Low Trading Activity (+19.4%) now trail the index by 8 to 10 points. Over the trailing 5 years the long-run pattern is unchanged: High Momentum remains the strongest risk-adjusted performer (26.7% annualized, Sharpe 1.5), Low Volatility delivers 10.3% annualized on 10.5% volatility for a Sharpe of 1.0, and Low Basis returns 11.0% annualized with a Sharpe of 0.7. All three clear BCOM's 7.1% annualized and 0.5 Sharpe; High Basis (Sharpe 0.3) and Low Trading Activity (Sharpe 0.2) do not.

Factor Correlations:

Long-term correlations between sectors and style factors are very low. The model is able to separate sector allocation risk from style risk providing key insights in the real drivers of risk and performance of a portfolio.

Table 4: Factor Correlations

Correlations	Agriculture	Energy	Metals	Basis	Open Interest	Momentum	ST Momentum	Trading Activity	Volatility	ST Volatility
Agriculture	1.00	0.25	0.30	(0.05)	(0.06)	0.06	0.17	0.07	0.15	0.19
Energy	0.24	1.00	0.20	(0.09)	0.33	0.06	0.09	(0.15)	0.05	0.17
Metals	0.32	0.17	1.00	(0.19)	(0.08)	0.03	0.08	0.10	0.08	0.09
Basis	(0.09)	(0.09)	(0.20)	1.00	(0.11)	0.05	(0.17)	0.09	0.06	(0.09)
Open Interest	(0.06)	0.31	(0.12)	(0.08)	1.00	0.01	0.05	(0.57)	(0.18)	(0.00)
Momentum	0.09	0.13	0.04	0.07	0.10	1.00	0.29	0.00	0.41	(0.07)
ST Momentum	0.25	0.14	0.11	(0.21)	0.06	0.31	1.00	0.03	(0.07)	0.49
Trading Activity	0.10	(0.13)	0.15	0.04	(0.54)	(0.04)	0.02	1.00	0.14	0.02
Volatility	0.13	0.06	0.10	0.04	(0.14)	0.42	(0.09)	0.13	1.00	(0.55)
ST Volatility	0.22	0.15	0.09	(0.07)	(0.03)	(0.05)	0.56	0.03	(0.54)	1.00

1 yr correlations on the right (above the diagonal), 30 days on left (below the diagonal).

Inflation:

Empirical testing finds that the ARC Commodity Model is an excellent predictor of breakout moves in the headline number, both in bouts of inflation and deflation. For

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September, we predict an increase in CPI, and an increase in year-over-year inflation. Reach out to info@assetriskcompany.com for our estimate.

Commodity Indices Risk Decomposition

We use a 6 month half-life for this risk decomposition so the model is fairly reactive to market conditions. Despite different sector allocations, both indices have similar risk and exposures to styles. Ex-ante volatility is 24.9% for BCOM and 28.4% for GSCI, little changed for BCOM and up about a point for GSCI from August. Momentum is now the largest single contributor on both indices.

Table 5: Factor Exposures

Factors Exposures	BCOM	GSCI
Agriculture	0.33	0.23
Energy	0.39	0.57
Metals	0.28	0.20
Basis	0.15	0.10
Open Interest	2.37	2.18
Momentum	0.67	0.85
ST Momentum	0.32	0.42
Trading Activity	1.69	1.36
Volatility	0.69	0.85
ST Volatility	0.62	0.76

Exposures, z-scores for BCOM and GSCI as of 9/30/2026



A portfolio that is long/short would be evaluated on the breakout between systematic exposures and idiosyncratic risk. Long-only managers will want to find their exposures relative to their benchmark. As shown in the correlation tables, sector correlations with style factors are relatively small. The model is able to separate risk due to sector allocation and styles risk. All risk is not equal. Systematic risk can display non-normal behavior when compared to specific or idiosyncratic risk. Both types of risks are driven by fluctuation, but systematic risk is driven by the “crowd” expressing some thematic bet. The systematic risk is related to market risk.

Table 6: Risk Attribution of BCOM and GSCI

Index	BCOM	GSCI
Total Risk	24.9%	28.4%
Agriculture	2.0%	1.3%
Energy	2.6%	4.0%
Metals	2.1%	1.2%
Basis	0.0%	0.0%
Open Interest	4.5%	4.2%
Momentum	6.2%	8.2%
ST Momentum	1.4%	1.9%
Trading Activity	-0.1%	-0.3%
Volatility	4.4%	5.5%
ST Volatility	1.5%	1.7%
Specific Risk	4.4%	5.9%

Ex-Ante Annual Volatility Decomposition for BCOM and GSCI as of 9/30/2026



Conclusion:

In this report, we have shown the factor performance driving the commodity markets. Using the ARC Commodity model, style-tilted portfolios have shown great performance and seem to be suitable benchmarks for active managers to track. We then conducted an analysis into the risk dynamics of two major commodity indices. The view of commodities as diversifiers is quite accurate. All of this was possible with the ARC model. The model enables the user to look at their book or portfolio and how it fits into their thesis as well as how it fits in the broader economic landscape.