



ARC Commodity Factor Risk Model Monthly Report August 2020

The Asset Risk Company (ARC) Commodity model is a cross-sectional commodity factor model. Factors including commodity sectors, sub-sectors, and styles are estimated daily. It provides a framework for managing risk and investment decisions. The model is presented in a nesting format allowing the decision maker to view the market from a macro lens of broad classes (metals, energy, agricultural) to finer product classifications, while preserving the attribution of risk between the style and non-style factors.

YTD, MTD & Historical Styles Performance Report:

Factor	MTD Perf	YTD Perf	Historical Returns*
Basis	-1.3%	7.8%	-4.9%
Open Interest	-0.3%	-6.9%	-2.0%
Momentum	0.0%	-4.1%	0.4%
ST Momentum	0.2%	-2.7%	-5.1%
Trading Activity	0.6%	1.3%	-0.1%
Volatility	1.9%	9.0%	2.6%
ST Volatility	2.3%	0.9%	-2.1%

* Annualized 2017-2020

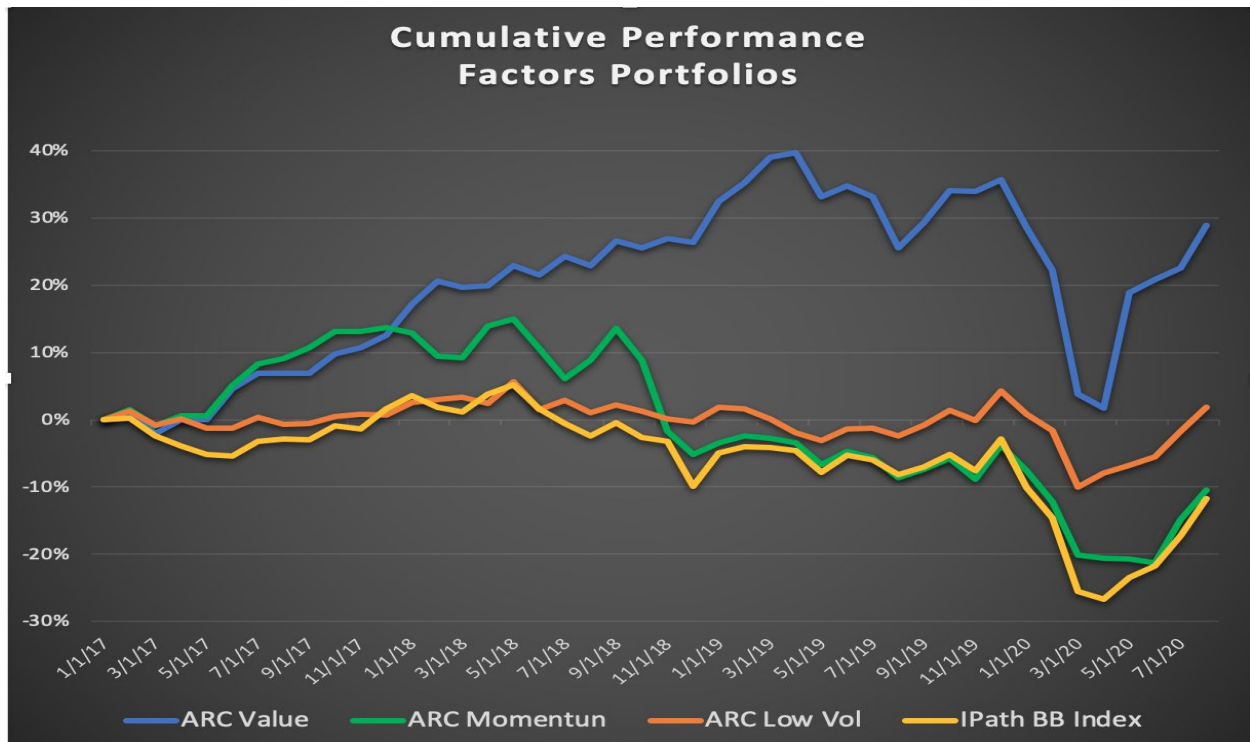
Basis is returning to its historical trend (mostly a negative performance) after an unusual upswing during the crisis while Open Interest is still negative for the year and has not reverted to its mean after the drop during the crisis.



Factor Tilted Portfolios Performance Report:

The value tilted portfolio has come back roaring, after a tough period during the crisis at the beginning of the year. Overall it outperforms all the other portfolios and indices for the last 3 years with a cumulative performance of 30% vs negative performance for the commodity indices.

Returns	ARC Value	ARC Momentum	ARC Low Vol	BB IPath ETN
Annualized Return	7.3%	-3.0%	0.5%	-3.3%
YTD (August)	-5.4%	-6.9%	-2.2%	-9.0%
Month (August)	5.7%	5.2%	3.7%	6.8%





Sectors, Subsectors MTD, YTD & Historical Report

ARC sectors and subsector returns come from the regression model and not from preset weightings of commodities (tilted portfolios). Agriculture and Metals are now positive with the year. Lumber & Pulp continues its upward move consistent with the news flow around the exodus from central business districts post COVID-19. Precious metals is clearly a safe refuge for the post COVID-19 crisis (recession & inflation fears).

Factor	MTD Perf	YTD Perf	Historical Returns*
Agriculture	4.2%	7.9%	1.9%
Grain And Oilseed	5.4%	8.2%	2.2%
Lumber And Pulp	27.3%	94.7%	28.7%
Proteins	-0.2%	-0.7%	2.3%
Softs	2.3%	11.6%	-0.7%
Energy	4.2%	-14.8%	-8.1%
Biofuels	9.0%	-12.3%	-4.2%
Coal	-1.1%	-6.1%	1.9%
Crude Oil	4.2%	-19.8%	-7.4%
Natural Gas	2.8%	-7.9%	-9.1%
Petrochemicals	6.7%	-6.9%	-11.4%
Refined Products	2.6%	-29.8%	-9.4%
Metals	5.6%	23.1%	14.3%
Base	7.2%	13.8%	10.8%
Precious	3.1%	44.0%	20.4%

* 2017-2020



Factors Correlations:

As market volatility decreases, short term correlations have come down. Long term correlations between Styles Factors are low.

Correlations	Agriculture	Energy	Metals	Basis	Open Interest	Momentum	ST Momentum	Trading Activity	Volatility	ST Volatility
Agriculture	1.00	0.53	0.54	0.18	0.16	(0.29)	(0.34)	(0.11)	0.26	0.34
Energy	0.34	1.00	0.45	(0.39)	0.34	(0.35)	(0.36)	(0.11)	0.12	0.36
Metals	0.08	0.62	1.00	0.10	0.13	(0.22)	(0.37)	(0.13)	0.09	0.31
Basis	0.12	(0.39)	(0.23)	1.00	0.06	0.01	0.08	(0.08)	0.13	(0.12)
Open Interest	0.02	0.06	(0.08)	(0.03)	1.00	(0.22)	(0.19)	(0.36)	0.00	0.02
Momentum	0.12	0.14	(0.13)	(0.35)	(0.05)	1.00	0.34	0.03	(0.18)	(0.06)
ST Momentum	0.21	0.01	(0.07)	0.11	(0.18)	0.43	1.00	0.02	(0.15)	(0.06)
Trading Activity	(0.22)	0.06	0.13	(0.24)	(0.58)	(0.03)	(0.10)	1.00	0.02	(0.04)
Volatility	0.23	0.42	0.32	(0.10)	(0.27)	(0.20)	(0.15)	0.30	1.00	(0.56)
ST Volatility	(0.18)	(0.21)	(0.00)	(0.08)	(0.11)	0.08	0.00	(0.08)	(0.69)	1.00

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

Commodity Indices Risk Decomposition

We look at the risk factor decomposition of the main indices through the prism of the ARC short term model. BB Com is currently overweight in metals and S&P GSCI in energy, which the model captures. Both have significant exposure to Open Interest, reflecting a bias towards the front of the curve (short maturity contracts are more volatile).

Risk	BB COM	S&P GSCI	Contribution BB COM	Contribution S&P GSCI
Total Volatility	16.0%	19.9%	100%	100%
Agriculture	2.1%	1.9%	13%	10%
Energy	2.9%	5.7%	18%	29%
Metals	5.6%	1.9%	35%	10%
Basis	0.3%	0.3%	2%	2%
Open Interest	2.1%	3.9%	13%	19%
Momentum	-0.3%	0.3%	-2%	2%
ST Momentum	-0.5%	-0.2%	-3%	-1%
Trading Activity	0.2%	0.2%	1%	1%
Volatility	0.4%	5.2%	3%	26%
ST Volatility	2.2%	0.0%	14%	0%
Specific Volatility	5.3%	4.7%	33%	24%

See more detailed analysis at:

http://www.assetriskcompany.com/docs/RiskFactorDecompositionCommodityIndices_20200831.pdf

Contact info@assetriskcompany.com for more information, or visit us at www.assetriskcompany.com