Low Vol Strategies for Commodities

Using the ARC commodity risk factor model, we test the validity of using low volatility as a selection criterion for commodity portfolios. Low Vol strategies have been popular in the equity space for years. Often labeled as “Smart Beta”, with a dozen of ETF implementations by the largest asset managers, there is open debate if they provide downward protection in volatile markets.

The 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 from a macro lense of broad classes (metals, energy, agricultural) to finer product classifications, while preserving the attribution of risk between the style and non-style factors.

The ARC Commodity model provides two volatility factors, a one year historical volatility and a short term computed over 30 days. It captures long term trends and at the same time short term volatility spikes common with this asset class. All the model’s style factor exposures are standardized and winsorized to deal with extreme values. Each day we generate an exposure for more than 1,200 commodities futures covering the entire term structure of contracts.

In order to test the concept of a low volatility strategy in commodities, each month we rank commodities in our model by their exposures to the volatility factor. The universe is reduced by considering only the most liquid instruments, with at least 6 weeks from maturity. By limiting ourselves to exposures further down the expiration term, we avoid considerations about physical commodity delivery and active rolling. We then select the top 10 distinct contracts with the lowest exposures to the volatility factor and also check that the short term volatility exposures are negative and then create a portfolio with equal weight. This is not an investment advice, but a research to illustrate how a risk factor model can be used in portfolio construction[1].

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[1] ARC is not a registered investment advisor in any jurisdiction. The discussion in this article is purely indicative and academic. Investment decisions entail risk of loss. Investors who invest in commodities should do their own research and consult with registered advisors. This paper illustrates what a hypothetical investor might experience using a low volatility strategy coupled with ARC’s proprietary model.

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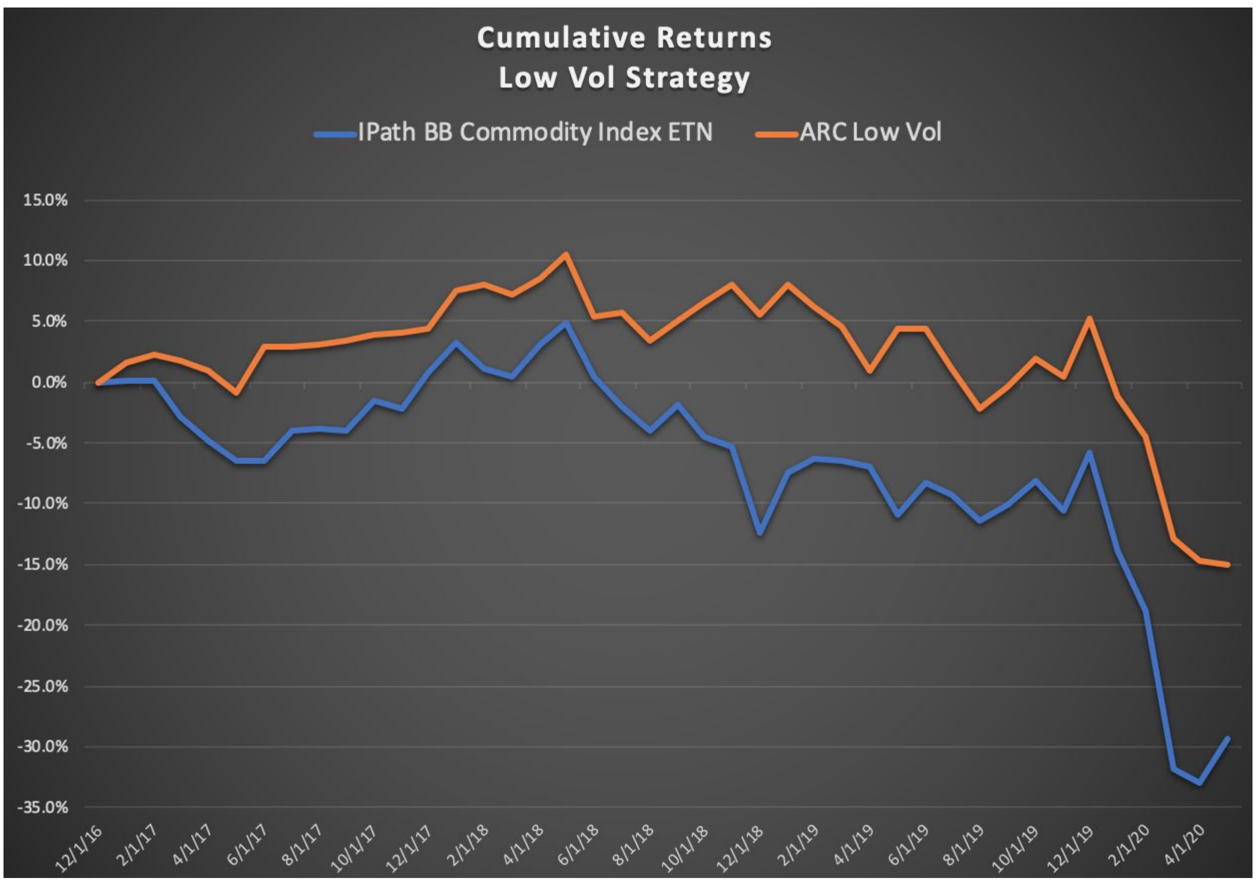
Below are plotted the cumulative returns for the strategy over the last 3 years. For comparison we added a commodity index tracker ETN.



We look at the returns over the period 2017-2020. Clearly the Low vol strategy provides downward protection during volatile markets. Over the period considered the annualized returns are higher with lower risk than the commodity index (see table below).

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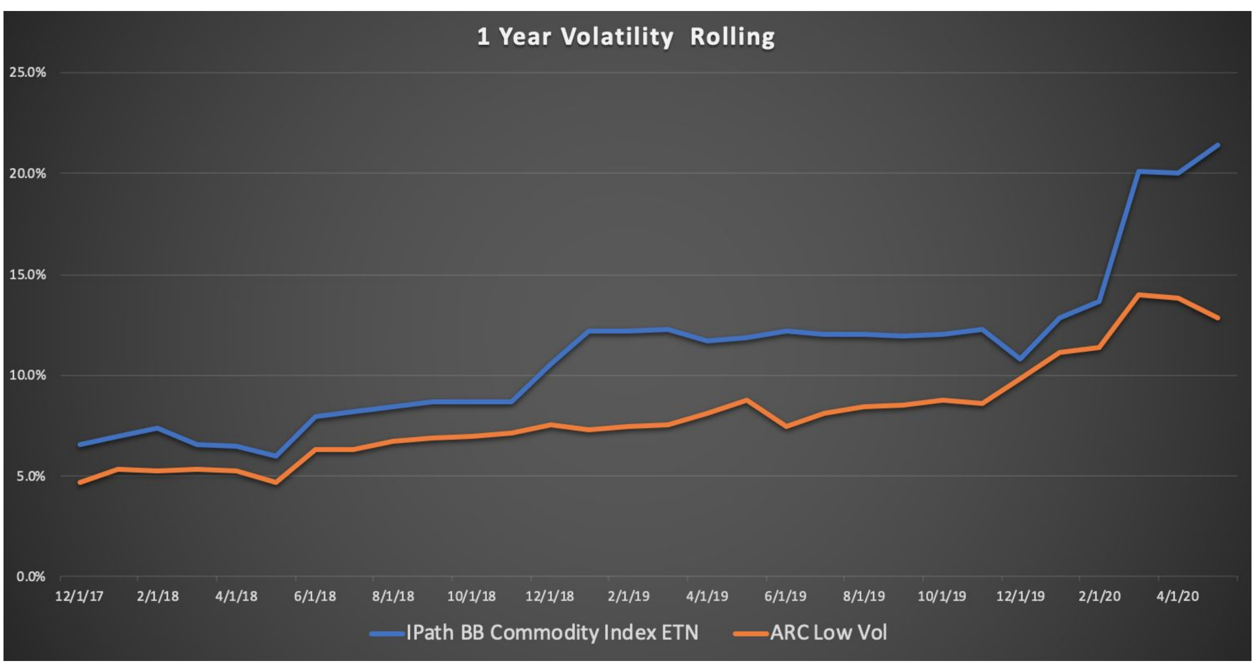
Low vol strategies for commodities seem to provide some downward protection in volatile markets. It is certainly worth exploring and can be done easily with a risk factor model.

Performance & Risk	IPath ETN	ARC Low Vol
YTD	-25.1%	-19.3%
2019	7.6%	-0.3%
2018	-13.1%	1.2%
2017	0.7%	4.3%
Annualized Return*	-9.7%	-4.7%
Risk*	13.9%	9.3%

* 2017-2020



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