Risk Parity: Does One Size Fit All?

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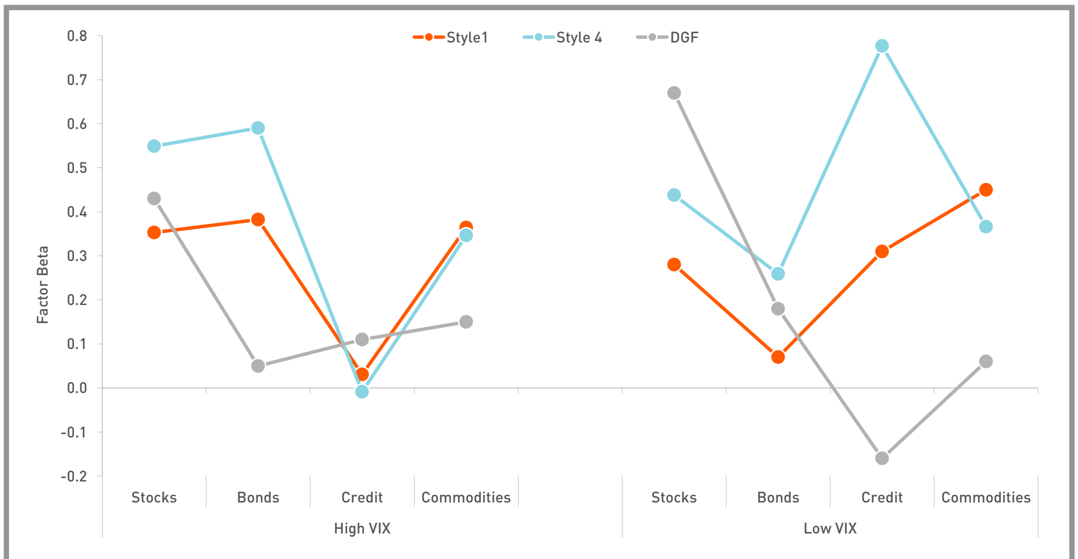

Source: Datastream, Bloomberg, FQ Analytics

Investors worried about the next market downturn are searching for unique ways to diversify their portfolios, and risk parity, a risk-based multi-asset strategy, continues to be an area of interest. Yet, some potential investors remain concerned about the likelihood of rising interest rates and the impact of the higher exposures to bonds that can be found in some traditional risk parity portfolios.

In fact, not all risk parity portfolios are constructed in the same manner. At First Quadrant, for instance, we take the view that risk parity is not always optimal and leveraged bonds not always necessary. Having an understanding of the different "styles" of risk parity (RP) should help investors better determine how a particular style of risk parity strategy will impact their overall portfolio – and how this impact can change with changing market environments. By carefully choosing a risk parity style, investors may be able to better insulate their portfolios against an end to the extended bull market environment in stocks or bonds. Examining the different styles of risk parity also allows a more accurate comparison to other multi-asset strategies such as Diversified Growth Funds (DGF).

The styles: four types of risk "parity"

RP managers have two common elements: the risk models and the risk factors they use. These common characteristics are combined with many idiosyncratic elements such as risk targets and underlying assets, but by using risk models and factors we can classify RP managers into four basic styles:

		Risk Model	
		Static	Dynamic
Risk Factors	Statistical	Style 1: Basic Static	Style 2: Basic Dynamic
	Macro	Style 3: Macro Static	Style 4: Macro Dynamic

"Risk Model" is the underlying construction methodology. Does the manager believe that risk is static or dynamic? "Risk Factors" are about defining risk: basic risk parity uses statistical measures like correlation and volatility; whereas the macro scenario approach says that the underlying causes of risk are as important as statistics.

Combinations of these qualities define four RP styles which suit most managers though, in real life, there will be variations.

Style 1: Basic Static. This style uses a long-term covariance matrix to produce risk and capital weights. An expanding window risk model is often used so the weights may change slowly over time, but over near-term horizons of three to five years, total risk rises and falls with the market cycle.

Style 2: Basic Dynamic. This method also defines risk in a statistical way but uses a combination of long-term and short-term models. While this style adapts easily to a steady change in volatility, a sudden increase can result in a sudden capital decrease and vice versa. Style 2 is often used in the media to represent "risk parity" and is often criticized for its reactive nature.

Style 3: Macro Static. The macro static approach recognizes that asset risks change under different market conditions, but predicting these scenarios is difficult. So the macro static approach equally risk-weights scenario portfolios rather than asset classes. Macro static is a "set it and leave it" portfolio like Style 1, so near-term volatility rises and falls with the market cycle.

Style 4: Macro Dynamic. Like Style 3, macro dynamic managers believe that risk changes over the market cycle and the optimal assets vary under each scenario. However, Style 4 managers believe that these risk scenarios can be anticipated. Since Style 4 allocates to the portfolio appropriate for the current environment, leveraged bonds are not always needed. Like Style 2, Style 4 portfolios can change significantly over time though it is for fundamental rather than purely statistical reasons.

Deviating from "parity"

Few RP managers are wedded to a pure, equal risk-weighted approach. All styles can use valuation elements, though Style 4 is particularly suited to developing strategic portfolios for different macro scenarios. First Quadrant favors this more flexible approach, shifting to a more diversified growth allocation during periods where growth assets are resilient to shocks, and levering bonds is not needed. The current environment is just such an example of a resilient market – where levering bonds would overexpose the portfolio to inflation and rising interest rate risk. The risk parity approach, levering bonds for maximum diversification, is implemented when markets are fragile and vulnerable to shocks. Now is not that time, but the day will come again when higher exposure to bonds will be needed, and a strategy with a flexible approach to asset allocation will come in handy.

The analysis: risk parity styles as risk changes

For illustration, we have chosen representative RP portfolios for Styles 1 and 4 (being in opposing diagonal style boxes) plus a comparative diversified growth fund (DGF) to show how each style allocates risk over the market cycle. A regression analysis was performed on four factors (equally risk-weighted) to represent the exposures through factor betas of each style. We partitioned the data into periods where the VIX is above and below its long-term median to represent periods of high and low volatility. We used data from March 2009 to September 2017 to capture the period over which all five portfolio styles had performance data. First Quadrant represents Style 4.

We note that 75% to 85% of each portfolio's variability is explained by these four factors, including the DGF.

What does our analysis show? As might be expected, Style 4 had more varied exposures across the two regimes. Style 1 had less pronounced, but still significant risk variability despite its static nature. The DGF appears less diversified in both VIX states, with risk concentrated in equities. In low VIX, the RP managers tend to increase their growth exposure through credit (Style 4 substitutes credit for much of its sovereign bond exposure during low VIX periods), while DGF increases equities and has a negative exposure to credit.

While our broader study examines the impact of these differences for all four styles in greater depth, we can see from this short analysis that RP managers vary by style, offering varying levels of dynamic diversification. This dynamic element is also stronger and more diversified than for a traditional DGF portfolio. By having a greater understanding of these differences, investors can be better equipped to make informed choices when it comes to investing in multi-asset strategies – particularly within risk parity, which offers an eclectic range of options to help investors meet their varying needs and objectives.

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