



Dog Bites Man

In August, Equity Selling in Risk Parity Was a Tiny Fraction of Market Volume

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Over the past few weeks, news reports have transformed risk parity from a widely used, modestly sized, slowly traded strategy that doesn't hold a ton of equities into a giant investment paradigm managed by traders who whipsaw the markets, buying and selling huge quantities of stock with every tick in volatility. Reports like the one described in [this](#)¹ and media stories like [this](#)² have been widely circulated, with their claims that risk parity investors were selling large amounts of equities, were selling them during the most volatile times in August, and soon will be selling whatever they've got left. Risk parity's name has even gotten attached to the chaotic trading in ETFs — even though there are no risk-parity ETFs!

Here's our own analysis. While nobody knows the precise amount, we pay pretty close attention to this and think assets managed in risk parity are a lot closer to \$150 billion. These funds use moderate leverage, but still hold equity exposures of only about 35% of invested capital, or a total of about \$50 billion to \$55 billion of exposure in the form of equity index futures or cash equities. Now compare that to the \$500 billion³ of volume traded daily in global equity index futures or the comparable volume traded daily in cash equities. If all of the risk parity managers somehow decided to sell the entirety of their aggregated ~\$50 billion equity exposure and sell it all in one day, that would be a decent amount of trading and markets would move some, but that, of course, didn't happen. What actually happened was that in aggregate, risk parity managers sold a portion of their exposure and didn't sell it all at once.

In their efforts to keep portfolio risk relatively steady over time, some, but not all, risk parity managers sell equities (and their other assets) when their estimates of asset volatility go up (and vice versa). In August, those managers' risk estimates could have as much as doubled or not changed at all, depending on their risk model. Now let's make a fairly aggressive estimate of how much stock traded as a result. Assume every single manager traded on their new risk estimate and traded all they had to trade in one week. Further, assume the average manager increased its equity risk estimate by half. That would mean selling one third of risk parity equity exposure (you need two thirds of the exposure when risk rises by half), about \$18 billion in a week, or less than \$4 billion per day. In other words, something less than one percent of daily futures market volume and we haven't even considered the liquidity available in the cash equities market. As practitioners, we think that likely overstates the trading volume from risk parity managers. Risk parity sellers were not enough to be more than tiny players in the market correction.

¹ <http://www.bloomberg.com/news/articles/2015-09-01/bank-of-america-crunches-the-numbers-on-summer-s-quant-storm>

² http://www.nytimes.com/2015/09/09/business/investment-strategies-meant-as-buffers-to-volatility-may-have-deepened-it.html?_r=0

³ AQR, Bloomberg



So why all the fuss? It turns out that some analysts estimated that investment in risk parity is as much as \$500 billion, and that 40% of its exposures are allocated to equities (so \$400 billion, or 80% of invested capital after applying 2x leverage). That implies risk parity managers hold about eight times the (~\$50 billion) exposure to equities they likely do. It also implies that the typical risk parity investor while trying to diversify away from a concentration in equity risk (the motivation for many of them) is investing in a portfolio with an even larger allocation to equities! A big part of this confusion is that these analysts loosely classified as “risk parity” any volatility-targeted strategy even though these strategies generally have nothing to do with the essential principle of risk parity, equating risk across asset classes, and may even be used by investors who aren’t the slightest bit interested in a risk balanced allocation.

How much equity exposure these volatility-targeted investors have or how they manage it is not known to us with any precision. We agree that if they generated gigantic amounts of trading, be it driven discretionarily or formulaically, they could move markets, but risk parity alone isn’t nearly big enough to do that or even to add much to it. Our own theory is a bit different. We think markets moved because investors re-evaluated what they were willing to pay for assets in light of some negative economic currents. Traders and, more relevantly here, trading commentators like to believe all price changes are about flows, that is, people placing orders or investors moving capital. But prices can move without trading, or with very little trading, if investors’ assessments of fundamentals or their eagerness to take risk, changes. We would venture that these changes had a lot more to do with the moves in August than anything else. But that’s just “dog bites man” and not nearly as good a story.

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AQR estimate of assets managed in risk parity sourced from eVestment and BarclayHedge and based on set of money managers who allocate equally across asset classes based on risk not by capital and have assets over \$100 million dollars.

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