

Investment Insight: No More Risk Parity Debate?

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No Debate

Recently, a sell-side analyst invited me to be on a panel to debate the merits of Risk Parity. As either an enticement or a challenge, he said that he might be able to get someone from GMO to join me on the panel. I recall having mixed feelings about the prospect of debating Mr. Ben Inker. On the one hand, Mr. Inker is a widely respected investor and researcher from a well-known firm, which has a sizable business built around traditional asset allocation investing. It would be indeed refreshing to have a thoughtful debate on Risk Parity with such a highly regarded investor. I would envision the discussion transcending beyond the typical fear mongering about the demise of Risk Parity when bond yields go up.

On the other hand, I am not sure we would find enough common ground to advance the debate. I view Risk Parity as an investment process built around true risk-based diversification that captures market risk premiums. In contrast, GMO's arguments against Risk Parity, while more articulate than the typical fear mongering, and presented with a strong value bentⁱ, are built around a return-based forecasting framework. This perspective emphasizes return forecasts of individual assets that are quite uncertain rather than diversification which is the key principle of Risk Parity. In other words, these critics miss the forests for the trees (or for the timber?)ⁱⁱ.

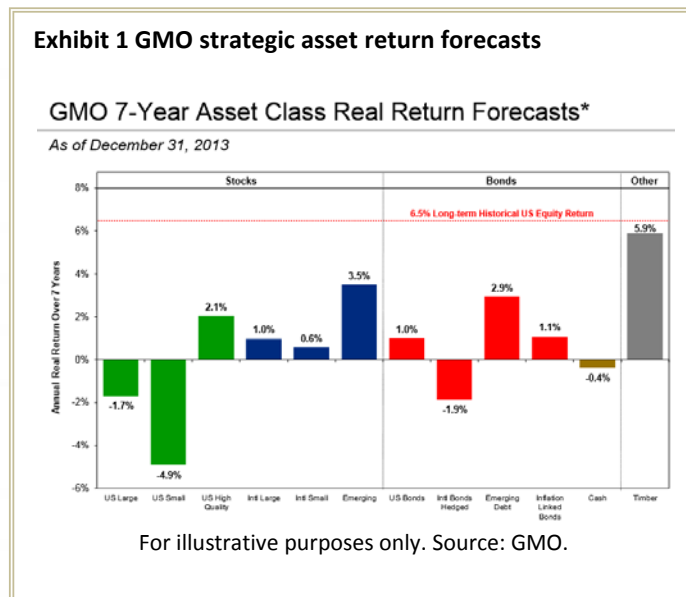
Still, would it be thrilling to debate and maybe, in an extremely unlikely event, convert the biggest critic of Risk Parity? But of course it was not to be. Oh well, the sell-side analysts are not just optimistic on earnings estimates.

GMO 7-Year Return Forecast

GMO has been arguing against Risk Parity, in the media at least, with papers and editorials in the financial press since 2010. As recently as December of 2013, a GMO article branded Risk Parity and other alternative or smart beta strategies together as snake oilⁱⁱⁱ. After such a strong description, I was surprised that they did not take the opportunity to debate the issue this time. I have to admit that face-to-face debate is not exactly the most effective forum for the exchange of investment ideas. It is probably too superficial for most investment professionals, who would prefer the quiet format of expressing their thoughts in written words. In fact, maybe I shouldn't agree to a debate either.

However, if there were ever a debate with someone from GMO, there is a very good counter argument to its continuing criticism of Risk Parity. It is conveniently supplied by GMO's own 7-year asset return forecasts, as of December 2013. If these forecasts were to be believed, a Risk Parity asset allocation portfolio would outperform a traditional 60/40 portfolio, at least for the next 7 years, of course.

Let's examine Exhibit 1, which displays the aforementioned return forecasts. The numbers are quite bearish for stocks. They are negative for US large cap and small cap stocks. Factoring in the cash return of -0.4%,

Exhibit 1 GMO strategic asset return forecasts


both US large cap and small cap stocks would have negative excess returns. Surprisingly or not, GMO expects US high quality stocks to have a positive real return of 2.1%. The returns for bonds, while also low, are not as bearish. They are positive except for the dollar-hedged international bonds. The excess returns over cash are even more attractive (both on a relative and risk-adjusted basis). Besides timber, the highest forecasts are from the emerging markets, with emerging equities expected to return 3.5% and emerging debt expected to return 2.9%. It is not hard to deduce from these forecasts that stocks are considered quite overvalued and bond yields

are assumed to rise modestly over time.

Based on these return forecasts, I shall compare the expected returns of a Risk Parity portfolio and a traditional 60/40 portfolio. The results show that the former has a higher expected return than the latter.

It is important to state from the outset that, this analysis in no way would suggest GMO might have or should have changed its view regarding Risk Parity based on its own forecasts. Nor does it imply that the validity of Risk Parity shall hinge on this particular set of return forecasts, which might turn out to be right or widely off the mark. The analysis merely poses a simple question: "Could these forecasts be consistent with a Risk Parity approach?"

Portfolio Expected Returns
Exhibit 2 Select asset classes and portfolio weights for a 60/40 and a Risk Parity portfolio

	Real Return	"60/40"	"Risk Parity"
US Large	-1.7%	25%	15%
US Small	-4.9%	5%	10%
Int'l Large	1.0%	25%	15%
EM Stocks	3.5%	5%	10%
US Bonds	1.0%	15%	45%
Int'l Bonds Hedged	-1.9%	15%	45%
EM Bonds	2.9%	5%	15%
Inflation Linked Bonds	1.1%	5%	45%
Cash	-0.4%	0%	-100%

For illustrative purposes only. Source: PanAgora.

Exhibit 2 shows the expected asset class returns and weights of a 60/40 and a Risk Parity portfolio. We have omitted high quality stocks, international small cap stocks, and timber, since most asset allocation portfolios don't have a dedicated allocation to them. Risk Parity portfolios typically invest in commodities as a way to hedge inflation. However, it is even harder for anyone to forecast long-term commodity returns^{iv}, as former Fed Chairman Bernanke admitted when asked about the prospect of gold. In any case, timber does not represent commodities in general.

Traditional 60/40 portfolios are often capitalization weighted while Risk Parity portfolios are risk weighted. Under this general guideline, we put together two

portfolios in Exhibit 2. The strategic capital allocation of the 60/40 portfolio has 25% each in both US large cap and international large cap, 5% each in both US small cap and EM stocks, for a total of 60% in stocks. The 40% bond allocation is invested with 15% each in both US bonds and international bonds, and 5% each in both EM debt and inflation linked bonds.

For the Risk Parity portfolio, we have chosen a leverage of 200%, which is comprised of a capital allocation with 50% in stocks and 150% in bonds, respectively. The 50% stock investment comes from 15% each in both US large cap and international large cap, and 10% each in both US small cap and EM stocks. As for bonds, we assume an allocation of 45% each in US bonds, international bonds, and inflation linked bonds, with the remaining 15% in EM debt due to its higher volatility.

Combining the expected returns and portfolio weights in Exhibit 2 yields the expected portfolio returns shown in Exhibit 3. The strategic 60/40 portfolio would deliver a real return of -0.18% while the strategic Risk Parity portfolio would deliver a real return of 0.68%. While both returns are dismal compared to historical averages because of the low asset return forecasts, the Risk Parity portfolio does outpace the 60/40 portfolio by 0.86% per year.

Exhibit 3 Expected portfolio returns

	"60/40"	"Risk Parity"
Expected Real Return	-0.18%	0.68%

For illustrative purposes only. Source: PanAgora.

Additional Advantage of Risk Parity

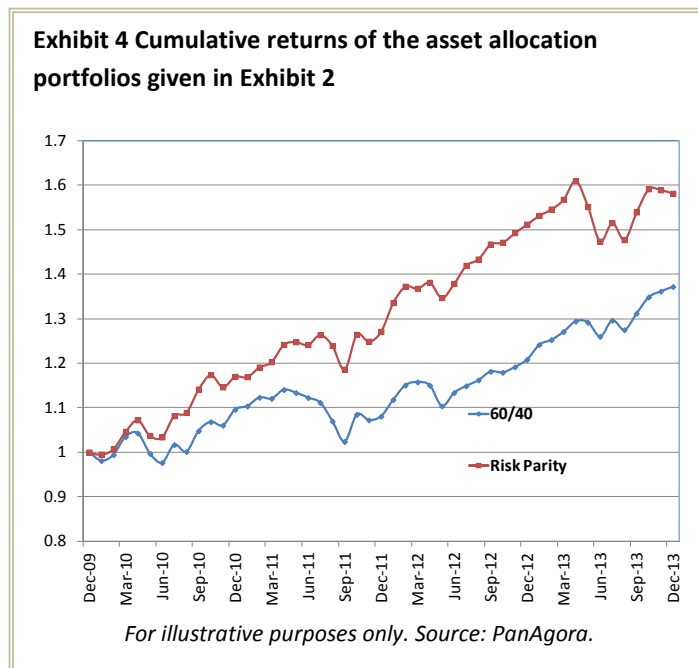
I would not expect critics of Risk Parity to surrender on the basis of 86 basis points. In fact, most traditional TAA managers argue that asset allocation portfolios should be enhanced through active management guided by the manager's ability to forecast asset returns. I agree with that to some extent. In fact, Risk Parity can also make tactical shifts away from the portfolio's strategic allocation to achieve desirable returns while also controlling portfolio risk, which is nearly impossible under traditional asset allocation approach. If the GMO forecasts are to be believed, as the following example illustrates, a Risk Parity approach with active risk allocation offers a superior risk/return profile than any traditional long-only portfolio ever could.

Suppose an investor wants to achieve a targeted annualized return of 3.5% for the next 7 years. Purely based on a traditional asset allocation approach, the investor would have to put everything in emerging market equities, which is highly risky. Only an investor that had severe over-confidence in the precision and accuracy of their forecasts would be crazy enough to do that.

Using a Risk Parity approach, one can diversify portfolio risk with an appropriate use of leverage. For example, a portfolio of 35% in emerging market equities, 150% in US bonds, and 15% in emerging market debt, would achieve an expected return of 3.56%, with a much lower risk and more importantly far less sensitivity to global macroeconomic shocks. Compared to a portfolio with 100% EM equities, this Risk Parity portfolio is a more prudent, conservative portfolio for investors who are not averse to modest leverage but are rightly concerned about risk concentration and uncertainty in forecasts. In fact, because equities are inherently levered investments due to corporate borrowing, this Risk Parity portfolio probably has a lower effective leverage ratio than the portfolio with 100% EM equities.

Have the Critics Been Right about Risk Parity so far?

One potential rebuttal to the previous analysis is “Sure, Risk Parity might work better given these low future expected equity returns. But the critics must have been right for the past few years when stocks have done so much better than bonds.” Has Risk Parity done poorly versus 60/40 since Mr. Ben Inker first penned his criticism about Risk Parity?



To answer this question, we provide Exhibit 4 in which we plot the cumulative returns of the two representative portfolios from Exhibit 2 since January 2010. It shows that since then, the Risk Parity portfolio has actually outperformed the traditional 60/40 portfolio by a sizeable margin. Yes, Risk Parity performed poorly relative to 60/40 in 2013 when the bond market re-priced the future trajectory of Fed policy in May and June. But the second quarter of 2013 was an exception rather than the rule. Over this four year period, the Risk Parity portfolio has an annualized return of 12.14% while the 60/40 portfolio has an annualized return of 8.23%. In addition, the two portfolios had similar annualized standard deviations. In other words, the Risk Parity

portfolio has achieved one of its main investment objectives: a higher risk-adjusted return.

Conclusion

It seems both ex post returns and ex ante forecasts by the biggest critic of Risk Parity point to the superiority of Risk Parity over the traditional asset allocation approach. This is my concluding remark for this fictitious debate.

So, no more Risk Parity debate? I hardly think so. “Everyone knows bond yields are going up!” I hear that uttering ringing again in the distance.

Index Descriptions

The Citigroup World Government Bond Index (formerly Salomon Smith Barney World Government Bond Index (WGBI)) is a market-capitalization-weighted benchmark that tracks the performance of 23 government bond markets including Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Malaysia, Mexico, the Netherlands, Norway, Poland, Portugal², Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

The Morgan Stanley Capital International (MSCI) World Index is an unmanaged list of securities from developed and emerging markets, with all values expressed in U.S. dollars.

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ⁱ Inker, Ben, "The Hidden Risks of Risk Parity." GMO white paper, March 2010; Inker, Ben, "The Dangers Of Risk Parity." *The Journal of Investing*, Spring 2011 Vol. 20, No. 1: pp. 90-98

ⁱⁱ Qian, Edward, “See the Forests For the Trees.”
PanAgora Investment Insights, August 2012

ⁱⁱⁱ Montier, James. “No Silver Bullets in Investing (just old snake oil in new bottles)”, GMO white paper,
December 2013

^{iv} Contrary to some misconception, commodity roll yields are not a reliable predictor of long-term commodity returns (Qian, Edward, “Roll Yields, Prices and Commodity Returns”, PanAgora investment insight, November, 2011)