



Conversations with...

Ray Carroll, PhD, CFA, CIO, Neuberger Berman Breton Hill

Alternative Risk Premia: Market Data, Human Insight

Faced with the unusual challenge of entering the late stage of an investment cycle with high valuations in both equity and bond markets, investors are increasingly focused on finding effective portfolio diversifiers. **Ray Carroll, CIO at Neuberger Berman Breton Hill** argues that quantitative strategies that seek to extract long-term alternative risk premia from financial markets can be a cost-effective source of that diversification. But he also thinks that 2018, which saw negative returns to virtually all traditional and alternative risks, was a useful reminder that the true potential of quantitative investing can be realized only with the application of the fundamental insights of skilled and experienced human analysts.

What are alternative risk premia?

Over the long term, theory and empirical observation suggest that the corporate bond market generates a higher return than the government bond market, and the equity market generates a higher return than the corporate bond market. That higher return comes from being paid a premium to assume risks: you assume credit risk when you buy corporate bonds because a company is deemed more likely to default than a sovereign; and as an equity holder, in the event of a problem you will lose your money before a bondholder loses theirs. We would describe these as traditional risk premia.

Academics and practitioners have been identifying alternative risk premia for decades. We think the most thoroughly tested are the value, carry, quality, momentum and insurance risk premia. On average, assets that trade at lower valuation multiples outperform over the long term: there may be good reasons why some trade cheaply, but investors are compensated for taking that risk. Similarly, higher-yielding assets outperform over the long term, as investors are compensated for the risk of price volatility while they are “carrying” those assets to maturity. Outperformance is also associated with companies that have stable cash flows and low debt: this may be because investors are compensated for “the risk of missing out” on more exciting growth prospects. Companies that have recently appreciated or fallen in value also appear to earn a premium for those investors who buy or sell into the trend: the longer the trend persists, the higher the risk that it will begin to reverse. And finally, people tend to overpay to insure against the loss or impairment of a valuable asset—whether a house, a life or an equity portfolio insured by buying a put option.

Have investors become more interested in strategies designed to extract these premia?

We have seen interest building for a decade or more, but it has picked up in the later stages of this long cycle. Investors understand that the 60/40 mix isn’t very well diversified and that the past decade probably isn’t indicative of future long-term return or risk, so they are looking for strategies or assets that are less likely to be correlated with stocks and bonds.

Traditionally, investors went to the hedge fund world for those solutions. They still do that, but today they are more aware that a lot of the return-generating exposures in hedge funds are, in fact, alternative risk premia. Investors have adopted cost-effective quantitative strategies where they see that alternative risk premia can be systematically captured, reserving the hedge fund allocation for strategies that are more idiosyncratic or illiquid. In addition, as institutional portfolio construction processes have become more factor-based, it has become easier to plug quantitative and factor-based strategies into those processes.

Why do alternative risk premia tend to be such good diversifiers?

One reason is the way these strategies are implemented. They involve long and short positions—value exposure, for example, involves buying the cheapest assets and selling short the most expensive assets. They are therefore stock and bond market-neutral, or close to it.

However, market-neutral does not mean risk-neutral. These are risk premia, and just like traditional risk premia they go through cycles of under- and outperformance, reflecting changes in the level of the risk being compensated. Some, such as value, carry and selling options, naturally exhibit a medium-positive correlation with traditional equity risk: during a bout of risk aversion they are likely to underperform, albeit less severely than a long-only equity portfolio. Some, such as quality, are more defensive and naturally exhibit a low-positive correlation. Others, such as momentum, are uncorrelated on average but can exhibit high-positive or high-negative correlation from time to time.

The diverse nature of these alternative risks can help mitigate correlation—not only between alternative and traditional risk premia, but between the alternative risk premia themselves. Once you add different asset classes into the matrix, the layers of diversification potential build considerably. For example, the carry strategy in currencies can correlate strongly with equities during a bout of risk aversion because risk averse investors tend to run toward low-yielding safe havens. By contrast, carry in commodities exhibits no persistent correlation with equity risk. You can put those two carry strategies together, and also pair currency carry with the opposite risk of currency momentum, and in addition maybe favor currency carry positions that have exhibited less correlation with equities in the past—and what you get is most of the benefit of the currency carry premium with much of its left-tail risk diversified away. There are dozens of these offsetting risk exposures in a matrix of multiple risk premia across four asset classes.

Given these multiple sources of diversification, how do we explain 2018?

It was extremely unusual, in 2017, to see virtually all traditional and alternative risks compensated with positive calendar-year returns. It was just as unusual, in 2018, to see virtually everything end the year in the red. Investors are asking what turned these previously weakly correlated risks to underperform in the same year.

One question in particular stands out: Have certain risk premia become permanently compressed because some large firms have raised a lot of money to pursue them? We see no evidence of that. First of all, it would not explain the uniformly positive returns of 2017. Second, the worst performers of 2018, such as value, tended to be the least-crowded, whereas some of the more crowded strategies,

such as momentum, were among the better performers. Third, while alternative risk premia strategies have attracted flows, it is worth remembering that they are often just purer versions of the value and quality strategies at the heart of much traditional long-only active management—and the flow out of traditional active into passive management has dwarfed the flow into alternative risk premia.

Finally, while 2018 calendar-year returns showed concurrent negative returns across risk premia, returns through the calendar year did not. It was a tough fourth quarter for equities, but not for many of the alternative equity risk premia, for example, which went through their most difficult time earlier in the year.

The other notable thing is that, in general, it was the more naïve or purely systematic strategies that performed least well in 2018. Few posted good positive returns, but the more nuanced and fundamentally informed did a better job of limiting the downside and spotting opportunities.

What do you mean by “fundamentally informed” quantitative investing?

Quantitative processes are great for analyzing large datasets on thousands of companies to update investment metrics. But is that analysis backed by a good understanding of the ecosystems in which those companies operate, the performance indicators that are relevant to their businesses, or how circumstances are changing in real time? We believe they need to be. Our efforts focus on seeking out alternative fundamental datasets, understanding sectoral idiosyncrasies and drawing on the knowledge of Neuberger Berman’s army of company analysts.

For example, our momentum metrics go beyond simple price momentum, and even beyond fundamental earnings momentum, to include insights from credit card data or even keywords from company management calls fed through language-processing software.

At the sector level, think about basic metrics like the price-to-book ratio for the value factor, or free cash flow for the quality factor. Some technology companies trade with extremely high P/B ratios. We know we need to adjust that to take account of the enormous investment they make in research and development, because if we didn’t, we would never discover attractively valued technology companies. Similarly, while low free cash flow may identify a low-quality company—it often reflects a high level of capital expenditure, which often drags on performance. But some management teams are simply excellent allocators of capital. And in the regulated utilities sector in general, capex turns out not to be a drag because regulators effectively guarantee a return on investments in essential infrastructure. That observation led us to research ways to focus on operating cash flow rather than free cash flow in utilities.

At the company level, we have a process that reports meaningful differences between the views of Neuberger’s fundamental analysts and our quantitative metrics for the stocks we have an interest in. That often amounts to nothing, but it sometimes suggests an adjustment to the metric, or even a whole new avenue of research into whether there is quantitative backing for the way the analyst looks at the stock. A recent example concerned a multinational tobacco firm that acquired an e-cigarette manufacturer and a cannabis producer: the traditional quant metrics pegged the tobacco giant as a quality stock, but we worked with our analyst to establish what adjustments were required to capture the effect of acquiring, for their growth and diversification potential, companies with negligible current revenues or earnings. Another recent example concerned a large healthcare services provider which, through our analyst, we know took early receipt of a large amount of medical premium payments: in our datasets we redistributed those payments to more appropriate calendar years to avoid the cash flow for the current fiscal year sending out anomalous signals from our quantitative processes.

How does this approach differentiate you from more traditional quants?

Putting performance aside, I think the difference is most obvious in the size of our portfolios. While our universe of stocks is extensive, the portfolios we build from them are in between traditional quants and a concentrated fundamental manager. The 140 longs in our U.S. risk premia strategy, for example, is much smaller than the many quant portfolios that run to 500 or 2,000 stocks. We believe in meaningful exposure to our highest convictions, whereas traditionally, quants over-diversify because they know that some of the hidden value traps or quality traps that I’ve just described will inevitably slip through.

That also implies a difference in terms of cost, of course. But we firmly believe that the ultimate winners in this space will be those who achieve the best ratio of research capability to cost of delivery. We think quantitative management and alternative risk premia should be research-focused strategies, and that's why we have a 20-person team that works closely with our 40-strong central equity research team, as well as Neuberger Berman's dedicated and growing Big Data team.

Some commentators say that alternative risk premia will do to hedge funds what ETFs have done to active management. I see what they're getting at, but I think it's a mistake to see what we are doing as merely the commodification of well-known factors: this is about delivering returns based on investment insights, and doing that diligently requires substantial effort and investment.

AT A GLANCE

Multi-Style Premia

A quantitative approach that seeks to generate absolute returns with low correlation to traditional asset classes.

- Invests both long and short in a variety of instruments across multiple asset classes as it seeks to generate returns in both up and down markets with low sensitivity to directional market movements
- Aims to provide exposure to a diversified set of factors, which have been shown to deliver positive returns over time...

Value: Cheap assets tend to outperform expensive assets

Quality: Assets with strong fundamentals tend to be resilient in volatile markets

Carry: High yielding assets tend to outperform low-yielding assets

Momentum: Winners tend to outperform losers

Low risk: Low-risk assets often outperform higher-risk assets

- ...across a variety of asset classes

Equities

Volatility

Commodities

Currencies

Rates

- Experienced team has managed alternative risk premia strategies for over 20 years through multiple market cycles

This material is presently solely for informational purposes and nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security. No recommendation or advice is being given as to whether any investment or strategy is suitable for a particular investor. Information is obtained from sources deemed reliable, but there is no representation or warranty as to its accuracy, completeness or reliability. All information is current as of the date of this material and is subject to change without notice. Any views or opinions expressed may not reflect those of the firm as a whole. Certain products and services may not be available in all jurisdictions or to all client types. The use of tools cannot guarantee performance. Diversification does not guarantee profit or protect against loss in declining markets. As with any investment, there is the possibility of profit as well as the risk of loss. Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal. Unless otherwise indicated, returns shown reflect reinvestment of dividends and distributions.

Past performance is no guarantee of future results.

This material is being issued on a limited basis through various global subsidiaries and affiliates of Neuberger Berman Group LLC. Please visit www.nb.com/disclosure-global-communications for the specific entities and jurisdictional limitations and restrictions.

The "Neuberger Berman" name and logo are registered service marks of Neuberger Berman Group LLC.

©2019 Neuberger Berman Group LLC. All rights reserved.

NEUBERGER	BERMAN
-----------	--------

Neuberger Berman
Lansdowne House
57 Berkeley Square
London W1J 6ER
United Kingdom