Neuberger Berman gets its Sherlock on

Asset manager deploys quant-cum-sleuth to sniff out portfolio risk. By **Faye Kilburn**

Neuberger Berman is exploring new ground with a novel hybrid quant-cum-detective – complete with his own team and proprietary methods – to detect unwanted risks lurking in its portfolios.

Maarten Nederlof's remit with Neuberger is to help the $339 billion asset manager and its clients achieve a better understanding of alpha, traditional premia and alternative premia in their investments.

As founder and chief investment officer of Risk Premium Investments (RPI), the independent asset manager and multi-asset investment advisory firm, Nederlof and his team built alternative risk premium (ARP) portfolios.

Maarten Nederlof

They also built a proprietary tool – Strategy Detective™ – that uses return data to analyse the style of fund strategies. With its acquisition of Nederlof and his team, Neuberger also acquired exclusive use of this analytical tool, along with RPI's $500 million in assets under management.

Strategy Detective™, which is based on returns data rather than positions, was built to help RPI's clients solve a specific problem. Over the past decade, as factor investing has become mainstream, investors have become increasingly aware that they have exposures to different return drivers – such as equity value or momentum, or fixed income carry – either implicitly or explicitly in their portfolio.

But, says Nederlof, current methods of understanding these exposures fail to take into account the enormous disparity in industry approaches to how such risk premia are defined and traded.

"As we were building ARP portfolios at Risk Premium Investment, there was this realisation that the way you build your portfolios has a lot to do with your final results. For example, there are many different definitions of what equity value is – and many ways to capture it – even if you broadly agree on the definition. There is a diversity of performance outcomes, even though fund managers may say they are doing the same thing," he adds.

For Neuberger, knowing its exposures at a more granular level will help it gauge how well-balanced the factor risks of its portfolios are and how to adjust them. It will tell Neuberger what the portfolio might do in risk-on and risk-off market conditions, how the alphas are expected to behave over time, and the expected varying contribution to market risk for each strategy over time.

Not so elementary

Returns-based analysis tools typically work by taking the returns of different benchmarks. For example: a large-cap growth index, a large-cap value index, a small-cap growth index and a small-cap value index. A returns-based tool runs a regression analysis between the performance of each benchmark and a given mutual fund – to categorise the fund style.

However, says Nederlof, there are many downsides of these tools – not least that typical inputs tend to be benchmark and academic indexes, which are not investable. Or – more to the point – are not how anyone would invest.

Furthermore, the disparity between how funds define the factors means the real world of active managers is much more diverse than the benchmarks available to analyse them.

"If I wanted to go back to traditional-style analysis, and figure out if someone is an equity value manager, I could use a widely disseminated value index and run a regression against that manager and look for a statistical performance relationship," says Nederlof. "[But] there are two problems with this approach. First, there are many different definitions of value out there, so I will not be able to see which one is in use by this manager. But, second, if a given hedge fund or mutual fund is using a very particular type of value strategy unlike the popular definition, I might not see it at all."

In order to do a better job of reflecting the diversity of the various risk premium strategies, Strategy Detective™ has finer, more sharply honed detectors capable of distinguishing between the dozens of different approaches to say, value strategies.

"Now we not only know that it's a value manager, we can determine it is a cashflow-oriented value manager, or a dividend yield-oriented manager or an earnings yield-oriented manager. We call these reference strategies 'receptors' – analogous to neurotransmitter receptors. We built this whole library of realistic reference strategies."

Each receptor is a separate trading strategy that captures a specific alternative risk premium. There are over 700 receptors in the library.

"Every strategy we build is meant to be as realistic and investable as possible," he adds. "Using real-world factors to measure against a live, skin-blood-and-bones manager explains their behaviour much better than using theoretical factor indexes – especially those that are not investable."

Strategy Detective™ uses relatively straightforward regression analysis to do its work. Nederlof says fancier approaches, such as unsupervised machine learning, could do the same job but have clear drawbacks.

"The unsupervised approach only works well if all the factors are really well behaved, and they're orthogonal and are independent of each other," says Nederlof. Traditional models, by contrast, are actually extremely robust, he adds, but their explanatory power has been limited because the factor indexes they have used in most cases are "generalised and fairly blunt when compared to the nuanced strategies real-life active managers follow".

The asset manager appointed Nederlof as head of portfolio solutions for the Americas in its quantitative and multi-asset class investments team (QMAC) in November 2019. He reports to divisional co-heads Erik Knutzen and Doug Kramer. Before founding RPI, he headed portfolio solutions at Paamco and ran pension strategies at Deutsche Bank among other roles. He began his career at Salomon Brothers in the 1980s as part of a research and solutions team under bond-market trailblazer Marty Liebowitz. "One lesson I learned early in my career is if you listen to clients and solve their problems using tools that are available to you that might not be typically associated with that particular problem, you can build new businesses," Nederlof says. In factor detective work, it seems, retooling existing approaches can yield results. ■