

## 'Using judgement with automation to avoid another failure in Portfolio Risk Management' Written by Shahid Chaudhri, Chief Investment Officer, Alpha Beta Partners.

A decade ago, The Times of London published my article "How to Prevent Another Failure in Risk Management". I stressed the need for a multi-pronged approach towards risk management, comprising a combination of qualitative and quantitative techniques, for regulators to detect early signs of an imminent crisis.

Since then it has generally been accepted that that one of the main factors precipitating the Credit Crunch was an over reliance on risk models such as VAR (Value at Risk) by Central Banks, Regulators and the Rating Agencies. This methodology assumed that asset prices were normally distributed and grossly underestimated the chance of extreme events. It also assumed that the correlations between asset prices assumed stability based on historical data.

A decade later, we are in a much better position now to implement the preventative approach that I outlined in my article of 2009, due to advances in technology and availability of new types of diversified funds.

However, with fears of another potential financial crisis looming, it is surprising to find that very few portfolio managers are applying the rigorous, albeit very intuitive, approach needed to reduce and manage the risks that could severely impact their investors' portfolios.

There is much talk in the press about using technology where it can surpass human capabilities, and about harnessing it at every step by human judgement to check assumptions and produce information to facilitate decision making. Indeed, it is generally agreed that that jobs carried out by human beings will increasingly be replaced by automation, and eventually even tasks currently requiring human judgement will be replaced by artificial intelligence

However, as far as managing multi asset portfolios in complex financial markets is concerned that is still very far away, despite the claims of many algorithmic trading systems.

The drawback with heuristic algorithms is that they are trained on past financial market conditions and are therefore unable to cope with completely new paradigms. Essentially, they fail due to model error and changes in regime that the model cannot capture due to the constraints imposed by model specification.

The alternative, purely qualitative / fundamental portfolio management, has difficulty synthesising the myriad of changing complex financial relationships which can provide valuable clues about asset price movements. This renders it unable to forecast market events, mispricing of downside risk and the negative impact of the 'herding' mentality and investor overconfidence.

Clearly, a smart combination of the two approaches is needed – one that deploys quantitative techniques for complex technical and mathematical analysis, the results of which can be qualitatively analysed by experienced portfolio managers.

Such an approach is second nature in other professions, such as medicine, where stethoscopes, XRAYs, scanning devises and chemical tests are all part of the automated tool kit, used with judgement, to evaluate risks and reach diagnoses,



An example of such an approach is offered by Alpha Beta Partners, where experienced portfolio managers harness the results of sophisticated quantitative techniques and use their intuitive judgments to make decisions to manage risk using a multi-pronged approach. Our Investment Committee team consisting of myself (ex-Salomon Brothers, Goldman Sachs and Coutts), John Reynolds (ex-NatWest Markets, ABN and RBS), Peter Toogood (ex-Forsyth, OBSR and Morningstar), Asim Javed (ex-State Street), Gill Hutchison (ex-Credit Suisse and OBSR) and Andrew Thompson (ex-Morley and Sarasin & Partners) with a client perspective, find the ability to use automated quantitative analysis invaluable in reaching qualitative decisions about portfolio compositions aimed at delivering high performance, risk controlled, low cost portfolios.

This is achieved by using automation in combination with qualitative analysis at every step of the investment process. Each step also enables risk to be analysed in a different way, leading to a multipronged approach to risk management.

The first step consists of using automated risk questionnaires together with client interviews and determination of risk categories.

Next, the impact of market factors – macro, fundamental, technical and geopolitical – on all the permitted asset classes is measured using quantitative models which generate signals with which the portfolio manager can formulate a few high conviction views and confidence levels. The results of the quantitative models used can provide further insights into market risks

These selected views can then be analysed using an automated implied views calculator to generate views on markets on which outlooks have not yet been formulated. These throw light on the interrelationships being assumed between asset classes and can lead to revisions before being finalised.

The complete set of views is next used by an automated optimisation model to generate portfolios for each risk category. Critical analyses of these is followed by scenario analysis where each portfolio is stress tested in worse case scenarios, such as the credit crunch scenarios, or the dot com crash. This enables the manager to use judgement to finalise decisions after understanding risk from yet another perspective.

Finally, the portfolios selected are monitored on an automated real time basis and the models that generated them are constantly reviewed as are deviations beyond limits set, of the performances and risks of the portfolios. If these are not due simply to transient market anomalies, the models can be corrected, and the portfolios rebalanced where appropriate. This last process can often highlight changes in market paradigms.

Due to the availability of low-cost automated systems, and low-cost diversified funds for asset allocation (ETFs and index funds), the above intuitive and transparent steps can be used to generate high performance, low cost and risk-controlled portfolios – but only if used by experienced portfolio managers.

Just as medical surgeons use their experience to harness the powers of medical technology, so highly skilled portfolio managers need to use judgements based on many years of experience and training to provide high quality portfolios for investors and reduce the chances of exposure to another failure in risk management.





## About the author, Shahid Chaudhri:

Shahid is a highly qualified and accomplished Investment Director, with broad experience that includes working at a range of top tier banks (investment bank, central bank and private bank), fund management companies, hedge funds and regulators across the world.

His professional track record includes collaborating with Fischer Black and Bob Litterman on the Black-Litterman Asset Allocation and Risk Management Model, Pioneering Asset/Liability Management at Salomon Brothers, and managing \$16bn Central Bank reserves.

Shahid's management experience includes Executive Director at Goldman Sachs, Director at Salomon Brother, Head of Client Solutions at RBS/Coutts and Chief Investment Officer at Capita Financial Group.

As a result, he is well versed in qualitative and quantitative fund management techniques, and aware of the regulatory issues that impact investment funds.

Do let me know if you would like to discuss this or any other topic.

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