



INTRODUCTION

FORECASTING WITH FIGURES

It might seem as though fund managers are just playing a numbers game, but quantitative methods help them to spot the lucrative trends

Quantitative techniques were once reserved for a handful of players in the marketplace. But things have changed. These days, most fund managers would claim to use some form of quantitative analysis as part of their investment process.

Their growing acceptance and use is no accident. Using these techniques brings many advantages, in particular when dealing with large amounts of data or when looking to exercise discipline.

However, none of these methods can guarantee success. Whether using these techniques to screen a universe of stocks down to a more manageable group, or as the tools to maintain discipline within your investment process, there are still many pitfalls to be avoided. With this in mind, here are five key tips for success in using quantitative techniques.

»» KEY TIPS

- **Remember that quant is only the servant of investment**

As technology and the availability of data have improved over the years, it has become much easier to simulate potential investment strategies through time. No one will ever show you a bad looking simulation. The skill comes in determining whether the results are real or illusory.

We are reminded of a strategy that a colleague devised to demonstrate this point back in 1993. The strategy had consistently underperformed the market every year over the previous 10 years averaging around -21 per cent annually. What a great shorting strategy! It turned out to be a portfolio of all the UK stocks beginning with the letter "O".

While this example is a little extreme, the message is clear. Any successful investment strategy must stand on sound theoretical underpinnings to have any chance of success.

- **Does the data reflect the complete picture?**

Quantitative techniques are by definition numerical

rather than qualitative. It is vital therefore that a sufficiently complete set of information is reflected in the data.

The celebrated academics Scholes, Merton and Black got caught out by precisely this pitfall when they started to isolate attractive investment opportunities identified by their option pricing model in the summer of 1972.

They bought into one attractively priced out-of-the-money warrant only to see its value fall rapidly when the issuing company was taken over. The life of the warrant had been cut short and the stock price wasn't pushed up far enough to give the warrant any value. This was the



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Simon Harris, GMO

reason they were trading so cheaply, the market knew something that they didn't.

It is important to make sure you are at least as well informed as other participants in the market.

- **There is virtue in simplicity**

The best investment processes, quantitative or otherwise, tend to be those that are easiest to understand. There is a certain appeal to making processes more complex. Adding more data and complication usually results in better historic simulations and more confidence for the user. But it does not necessarily lead to better performance.

There is a very good example of the effects of increasing complexity on the CIA's website. An experiment was conducted where eight experienced horserace handicappers were given the option of choosing firstly the five most important variables to use to handicap a race then 10, 20 and 40 variables from a total of 88 found on a typical past-performance chart. For example, the weight to be carried; the percentage of races in which the horse finished first, second, or third during the previous year; the jockey's record; and the number of days since the horse's last race.

In addition they were asked to give their degree of confidence in their forecasts. The results showed that their forecasting abilities remained the same with five, 10, 20 or 40 items. Indeed some forecasters produced worse results with more data. However, all the handicappers expressed increasing degrees of confidence as more information became available.

There is clearly virtue in simplicity. The more complicated a process becomes, the less easy it is to understand the real performance drivers. Getting the right balance between simplicity and sophistication is a key determinant of success.

» EFFECTIVENESS

- **Learn, innovate and evolve**

It is remarkable how long some strategies can continue to work in the markets. For example, UK companies making rights issues have continually been poor investments since our records began back in the mid-1960s.

However, the world does change. Many pricing inefficiencies get arbitrated away. In addition, the environment changes, rendering many strategies less effective. Back in the 1920s the investing community used an index called the 'blast-furnace index' to monitor the

performance of the economy. Of course today's economies are different in structure and using such an index would be ridiculous.

The key is to remain ahead of the competition and not to become in any way complacent. It is important to continue researching new ideas, updating old ones and of course incorporating lessons learned from real life investing.

» PULL OF THE PAST

- **Don't automatically assume that history will repeat itself**

Perhaps this is the most immediately obvious of the five tips, but it is remarkable how often investors ignore this and extrapolate past trends into the future. The highs recorded by many stockmarkets around the world a few years ago represent a good example. People were starting to talk about an end to booms and busts and simply because markets had risen by so much in previous years, they were bound to go on rising.

One of the best and most well-known examples of investors expecting history to repeat itself is when the yield on shares fell below bond yields for the first time in 70 years in the late 1950s.

At that time, many investors viewed stocks as more risky assets, where dividends were entirely at the whim of management, and expected shares to continue offering higher yields forever. However, this was a time when people were becoming more comfortable with equities, dividends were growing strongly and an unprecedented increase in inflation highlighted another advantage of equities over bonds.

Shares have now offered lower yields for the last 50 years, although the gap has narrowed in recent times.

Most investment strategies, especially those using qualitative techniques, rely on history repeating itself in some sense. But it is important not to have that as your starting position. Only well thought out strategies with a good underlying rationale win in the end, and this is the most important factor.

The distinction between the so-called "quant" managers and "traditional" managers is becoming increasingly blurred. More and more quantitative techniques are finding their way into the most qualitative of processes. Much like any part of an investment process, the quality of any quantitative process is only as good as the judgement behind it.

Simon Harris, director, investments, GMO

» CORPORATE STATEMENT

GMO was founded in Boston in 1977 and has more than \$35bn of assets under management. GMO's success is based on a disciplined, value-orientated investment philosophy and a commitment to providing investment solutions to its clients. As a leader in quantitative research, GMO builds its investment insights into a structured approach allowing systematic exploitation of market opportunities and minimising emotional biases. This approach has provided the foundation for superior performance and created GMO's competitive edge.

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Contact:

- Jane Orr, director, marketing
Tel: +44 (0)20 7814 7600
Email: jane.orr@gmo.com