

CONTROLLED RISK

OVERTAKING THE BENCHMARK – BUT DOING SO SAFELY

Positive gains build up over the long term, just like the car driver who is going that little bit faster than the others on a lengthy journey

The Holy Grail of investment management may be to outperform the benchmark without taking any extra risk. Accepted wisdom, in the form of modern portfolio theory, says there is about as much chance of achieving this as there is of finding the Holy Grail itself. But accepted wisdom is about to be challenged.

There are, in fact, no theoretical obstacles to a portfolio providing above benchmark returns with benchmark like risk. In fact, it is possible for an active manager, using mathematical theory in a specifically developed investment process, to outperform the index over the long term by, for example, anywhere from 1 to 3 per cent, net of fees, year on year, with controlled risk.

This may not seem like much. However, this type of outperformance, delivered consistently and compounded on an ongoing basis over the long term, adds up.

» NO CATCHING UP

Consider two cars, one going at a steady 100km per hour, the other at a steady 103km per hour. Suppose they drive for one hour. The faster car will only have gained 3km. But now suppose they drive for 100 hours. The faster car will now be 300km ahead. After 10,000 hours, the difference is 30,000km. Over a long period of time, it becomes impossible for the second car to catch up.

The same applies to investment returns. If a portfolio can outperform the index by 2 per cent per year over the long term, the chances become small that the portfolio will ever return to the level of the index returns. As Chart 1 shows, the terminal value of a portfolio which started at \$10,000 and returned 2 per cent more than the S&P500 from 1974 to 2002 would be \$437,727. If the portfolio had exactly matched the S&P500 it would be worth only \$249,568.

The key to achieving this type of outperformance is consistency of returns and a high probability that the manager will be able to continue providing them. As anyone who has been stuck in a traffic jam can testify, it only takes one major hold up, and you have lost so much ground that you will never be able to make your journey in the time planned.

And, just as a third car travelling at 163km per hour might be unable to cope with a sharp bend in the road, some active managers may find themselves dealing with the same type of situation. Investment managers with an



‘There are, in fact, no theoretical obstacles to a portfolio providing above benchmark returns with benchmark like risk’

David Schofield, Janus International

ability to produce alpha who also place stringent risk controls on their process find themselves in a situation of being able to provide competitive rates of return at low levels of relative risk.

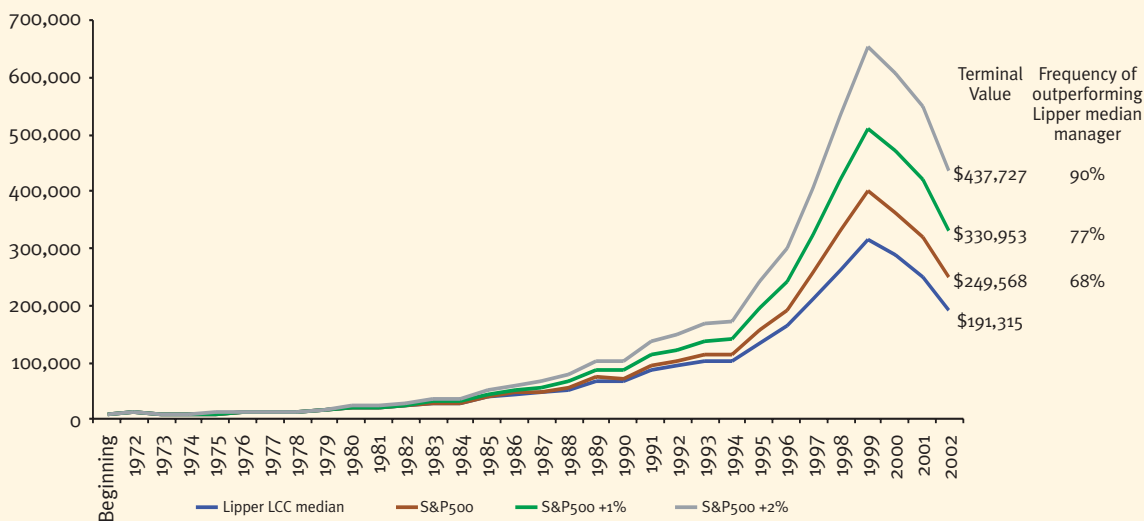
» MATHEMATICS

This type of strategy appears to be worth pursuing, but how? The answer lies in a robust mathematical approach; one which eschews all fundamental company analysis. And Janus Capital Group company INTECH, employs just such a methodology, which differs from that of most so-called quant managers.

Such a strategy should begin with the basic premise that any cap weighted index, like the S&P500, is not an efficient portfolio. Because no consideration is given to

1

Moderate, consistently delivered Alpha can go a long way
Lipper large cap core (median) vs S&P500 Index, growth of \$10k from 1974–2002



Source: Lipper

the correlation of stocks to one another (one of the biggest components of risk diversification) the index by definition cannot be the most efficient combination of stocks. By considering only stocks' relative volatilities and correlations, it is possible to build a more efficient portfolio that seeks to outperform the benchmark index with benchmark-like risk.

» EXCESS GROWTH

A key mathematical equation included in a seminal paper written by INTECH's Chief Investment Officer Dr Robert Fernholz shows that there is an excess growth rate associated with a portfolio and that it is possible to construct a portfolio that will be able to generate returns above the benchmark index with controlled risk.

$$\text{Excess growth rate} = \frac{1}{2} [\text{weighted average stock variance} - \text{portfolio variance}]$$

By using sophisticated statistical and mathematical techniques, it is possible to analyse the relative volatilities of stocks in the portfolio by attempting to find those with high relative volatility (resulting in a weighted average stock variance that is high). At the same time, the process analyses the correlation of stocks to one another, attempting to identify the combination that will keep the portfolio variance low (at or below that of the benchmark index). One-half of the difference will be the excess growth rate term.

By rearranging the weights of the stocks in the benchmark index to a more efficient combination, it is possible to build a portfolio that seeks to outperform the benchmark index while controlling risk. One half of the difference will be the excess growth rate term. INTECH's process aims to generate a return greater than the benchmark index within a three to five-year time frame.

It appears that our car can achieve its steady extra 3km per hour, but that will only be significant if we can also ensure that it won't come to grief on a sharp bend in the road. In the investment process, the risk controls allow the car to maintain its steady pace.

Beginning with the S&P500 Index in this case, liquidity and bankruptcy screens are applied to exclude those stocks which would be too expensive to trade or are identified as having financial concerns. The screens exclude stocks that are, for example:

- ranked 5/5 by Value Line (a service that ranks the strength of balance sheet and income statements of corporations with 1 being best and 5 being worst);
- stocks which trade at a price of less than \$10/share;
- stocks that trade less than \$1m a day on the exchange;
- those stocks which account for less than 1 basis point (0.0001 per cent) of the index.

2

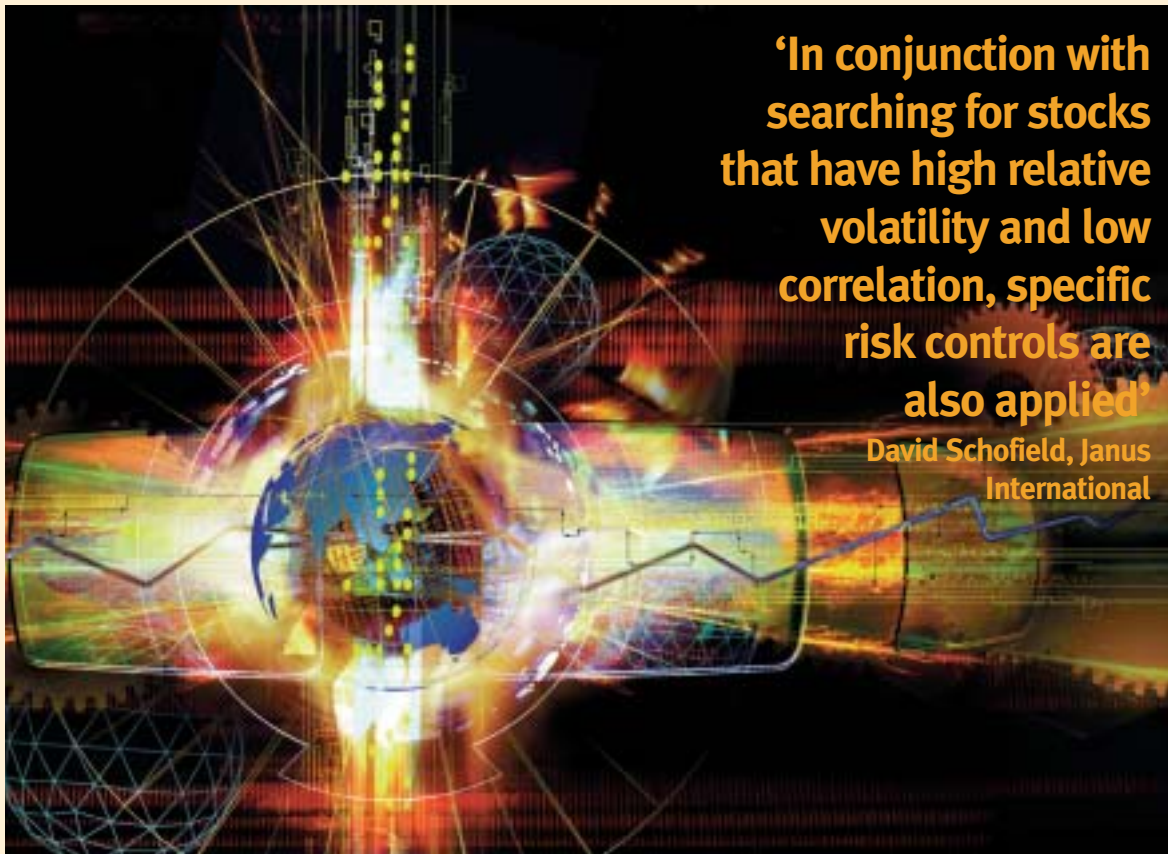
INTECH LARGE CAP GROWTH COMPOSITE vs S&P/BARRA GROWTH INDEX

ANNUALISED RETURNS: Periods ending 30 September 03

	Large cap growth (gross)	S&P/BARRA growth	Difference
Qtr to date	3.44%	2.75%	0.69%
1 year	25.41%	22.43%	2.98%
Last 3 years	-4.16%	-14.06%	9.90%
Last 5 years	7.56%	-1.04%	8.60%
Inception (30/06/93)	16.48%	10.27%	6.21%

Target excess return: 3%–4% per year
Estimated tracking error: 4%–5% per year

Source: INTECH



'In conjunction with searching for stocks that have high relative volatility and low correlation, specific risk controls are also applied'

David Schofield, Janus International

» CONTROLS

Typically, this process would exclude 20–30 stocks from the list of eligible candidates. The mathematical process, the process of rearranging the weights in the benchmark index to a more efficient combination, is applied to the remaining universe of securities.

In conjunction with searching for stocks that have high relative volatility and low correlation, specific risk controls are also applied. For example any security position in the portfolio is limited to a maximum of a 2.5 per cent differential from its weight in the benchmark index.

Additional risk controls include constraining beta of the portfolio to be equal to or less than the beta of the benchmark index and attempting to maximise the information ratio of the portfolio. The end result should be a portfolio that typically owns 50–90 per cent of the names in the benchmark index.

Once the portfolio weights are determined, regular rebalancing occurs if the weights have moved more than 10 per cent from their original targets in a six business

day rebalancing cycle. In conjunction with this rebalancing there is a re-evaluation of the weights in the portfolio on a weekly basis. The turnover in the portfolio typically ranges about 75 per cent.

The result is an investment process which has historically produced portfolios with consistent excess returns at low levels of relative risk*. Our car is able to achieve its 3km per hour greater speed than the first car, pulling well ahead of that car over the long term. But by not travelling at too high a rate of speed, it can manage any bends in the road and continue safely on course over time.

David Schofield, regional director for Europe and the Middle East, Janus International

NOTES

INTECH will act as sub-advisor to Janus International Limited for these strategies. All examples of portfolio value are for illustration purposes only and have not taken into account any charges, taxes, turnover or expenses.

* Past performance is no guarantee of future results and investment results and principal value will fluctuate so that shares, when redeemed, may be worth more or less than their original cost.

Janus International is made up of various entities including Janus International Limited, authorised and regulated by the Financial Services Authority. This information does not constitute or form part of an offer to provide discretionary or non-discretionary investment management or advisory services, other than pursuant to an agreement in compliance with applicable laws, rules and regulations.

INTECH uses mathematical investment strategies to construct portfolios designed to outperform their particular benchmarks. There is no assurance that this objective will be achieved.

» CORPORATE STATEMENT

Based in Colorado, USA, Janus Capital Group Inc. (NYSE: JNS) is a leading asset manager offering individual investors and institutional clients complementary asset management disciplines through the firm's global distribution network. It has offices in London, Hong Kong, Tokyo and Milan. As of 31 October, 2003, Janus Capital Group Inc. managed approximately \$149.8bn in assets for institutional and retail investors worldwide.

JANUS CAPITAL
Group

Contact:

- David Schofield, regional director for Europe and the Middle East, Janus International
Tel: +44 (0) 20 7410 1935
Email: david.schofield@janus.com