

FINE-TUNING THE RISK

HOW MUCH PAIN CAN A CLIENT STAND?

by PIETER FRANZEN

Among the lessons of the October shakeout is the importance of differing techniques of analysis in making decisions on funds management and asset allocation.

There is no perfect definition of a quantitative or qualitative approach to investment management; indeed, there are clear overlaps in the techniques assembled under the two headings. They have different connotations in different countries.

However, in this paper, quantitative will be defined as being retrospective, in that most of the quantitative techniques utilised seek to judge market and individual stock levels in the context of historical perspective. Techniques such as portfolio insurance also sit under the quantitative umbrella. The quantitative emphasis is increasingly swinging towards risk issues rather than just returns. Historical risk data is probably more useful to forecasters than return data.

Qualitative techniques tend to be more prospective in that they look forward and encompass price/earnings and price/cash-flow techniques based on earning projections through to longer-term valuation processes, such as discounted earnings/dividends/cash-flow models. The latter are obviously sophisticated approaches but “gut feel” combined with selective monitoring of the market grapevine, also tends to be positioned in the qualitative camp.

Distinctions blur in forecasting returns. As mentioned, the projection of returns is a vital function in the qualitative school. However, for quantitative assessments, projected returns are also a vital component in judging the attrac-

tion of current values in a historical perspective. It seems best to assume that projection of earnings/returns in the qualitative school is encased in methods to bring us back to present value assessments, while quantitative exponents would fit the bottom-line derived from projections into a more rigid historical perspective.

For example, until the recent “shakeout”, qualitative analysts spent a lot of time justifying the high prospective price/earnings ratio in the context of very optimistic projections of growth and corporate earnings world-wide. The quantitative brigade would have recognised that PEs, and all other ratios, were very high in a historical context and would have been out of the market for a while. Notwithstanding their reservations, it is quite clear that the qualitative players were in the ascendancy until early October.

The psychology and state of markets influence the popularity of analytical and portfolio management techniques. Preoccupation with quantitative techniques understandably increases at times of excessive market behaviour. It is no surprise that we are currently besieged by quantitative method exponents.

Earlier this century, the analytical methods enshrined by authors such as Graham, Dodd and Cottle tended to have a greater quantitative bias. There was more emphasis on yield comparisons and justification of higher overall equity

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market levels. Yields on shares were generally higher than bond yields, reflecting the higher inherent risks. Equities represented a far lower proportion of both total financial capitalisation and institutional portfolios, and companies were judged more in terms of their ability to maintain income distributions than for potential growth in their share price.

The many strands of the "efficient capital markets hypotheses" which have evolved over the past 20 years have left little doubt about the "efficiency" of financial markets in rapidly digesting new information. Many suggest it is therefore extraordinarily difficult to obtain unique information, with above market return potential, with sufficient regularity to justify the costs of obtaining it. If many organisations were to stop their research efforts, however, then the market would obviously become less efficient, making it easier for the remaining researchers to find value.

There appears to be general consensus on the importance of asset allocation relative to stock selection. The difficulties of successful risk-adjusted individual stock selection based on specific research have resulted in the past decade in an increasing move towards equity-indexed approaches within agreed overall asset allocations. This has been achieved through the increased use of indexed products and synthetics. Most observers would have it that this development is a reflection of the difficulty of specific qualitative forecasting; in some ways the use of indexing techniques can be regarded as an example of a quantitative approach.

In Australian equity markets, there is evidence that some fund managers have been able to outperform the broad equity-market indices through a combination of good research and an ability to stay close to the many key

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players in the marketplace. They can be regarded as good "specific-risk" managers. Nevertheless, indexed techniques are becoming more prevalent, especially for larger funds. In the final analysis, however, successful specific risk management can be swamped by cyclical risk, best managed through asset allocation. One *can* fine-tune volatility by setting asset allocation parameters.

Actuaries have long been preoccupied with the subject of "smoothing" returns, which can be described simply as taking a bit from today to look after tomorrow. It is worth observing that many capital-guaranteed products are deriving favourable benefits from the conservative "smoothing" policies of past years which have left tempting reserves in the kitty. In some ways portfolio insurance, a much discussed subject in the quantitative sphere, is a "smoothing" device which, its supporters say, has the additional advantage of minimising specific day-to-day human "emotional" input. The technique has considerable merit as a "sculpturing" device. It enables losses to be minimised in major market corrections at the opportunity cost of giving up some returns on the way up. The jury is out, however, as to its ability in times of extreme volatility to achieve the

desired objectives. This is not a criticism but an observation.

Financial instruments such as options, futures and options on futures have made it easier to employ techniques to reduce risk "volatility". Portfolio insurance relies heavily on the willingness of market-makers to deal in significant volume in the synthetic markets. Losses in that area since October have been considerable and trends in the industry will be followed closely by all those interested in the risk-reduction and portfolio insurance areas.

While other fundamental factors were behind the severity of the decline in equity markets in October, there is little doubt that computer-driven activities exacerbated the pressures in both the physical and synthetic market in the early days of the decline. It will be interesting to observe the aftermath and future implications for this particularly interesting area.

Another quantitative approach which especially addresses cyclical volatility is the selection of an appropriate management style.

Recent events have again highlighted how essential it is that trustees in organisations which sponsor super funds, indeed, any entity with funds to be managed, give serious attention to risk management. Consultants, investors and investment managers will have to liaise more precisely about this. An investment policy should result which will influence the adoption of an appropriate management style, itself designed to affect the projected volatility of returns.

The real issue for trustees of super funds is the extent to which they can live with volatility in their investment returns. Trustees need to clarify the extent to which they can suffer unexpected losses; put another way, how much pain can they stand?

Fund managers need to understand

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clearly a client's informed tolerance to variability in returns, and adjust portfolio strategy accordingly. To do so, it is necessary to understand the hierarchy of volatility that exists among different asset classes.

Shares are more volatile (that is, there is risk that their returns will deviate to a greater extent from an expected mean) than property trusts, which in turn are more volatile than fixed-interest investments. Returns from bonds are more volatile than cash.

In each case, the greater volatility generally implies higher rates of return *over the long term*. But investors in sharemarkets are looking for a premium in their expected returns over, say, bonds, to compensate them for additional risk.

These points can be demonstrated by looking at the 10-year returns for the period ended June 1987 in the Australian markets for each major asset class, together with their standard deviations, i.e. the range by which those returns have varied.

Contrary to expectations, cash outperformed fixed-interest securities over the period. The reason for that is the sharp falls in the Australian dollar in 1985 and 1986 which saw the authorities push cash rates much higher to protect the currency.

A second point of interest has been the strong returns from listed property trusts which, at least up to October, produced a similar return to shares, but with only half the volatility.

This hierarchy of volatility demonstrates the important lesson that risk *drives* returns. Shares do perform better, but they carry greater risk with them in terms of the variability of those returns.

What this means is that the asset-allocation process — the extent to which the manager decides to give exposure to each different class of assets (shares, bonds, property and cash) — plays a vital

AUSTRALIAN RETURNS & STANDARD DEVIATIONS

10 YEARS TO JUNE 1987

	Return %	Std Deviation %
ALL ORDINARIES	24.4	20.4
RESOURCE EQUITIES	22.1	28.7
INDUSTRIAL EQUITIES	27.2	18.2
PROPERTY TRUSTS (LISTED)	21.0	11.5
FIXED INTEREST	11.9	6.2
CASH	12.2	1.5

Source: Schroders Australia estimates.

role in controlling the overall risk profile of the portfolio, and, given the quantitative emphasis on risk, can be used as a vital tool within the quantitative umbrella.

In making asset-allocation decisions, managers assess growth, inflation, corporate earnings and the like — the general cyclical economic and political conditions which move markets.

Cyclical risk makes itself felt in individual markets:

■ In equity markets it is known as *systematic risk* — the correlation between movements in individual stocks and the overall movement of the market.

■ In bond markets, it reflects itself in the general direction of interest rates.

■ In equity markets however, there is also the risk associated with a particular industry or an individual company. This is *specific risk*, and modern portfolio theory stresses that specific risk can be diversified away. I consider, however, that quality research in the Australian market can uncover fundamental value often enough — before that value is fully appreciated by the marketplace — to justify taking specific risks and incurring the costs. That might lead managers to overweight certain securities relative to the index, should their research suggest underlying value.

Managers can control the level of market risk (cyclical) by setting medium-term minimum and maximum asset exposures. This will translate into a variety of management styles, and enables those

with funds to invest to make more accurate assessments of the likely volatility of their returns. A conservative management style in terms of cyclical risk, say a low maximum exposure to shares, may still have within its limited overall share exposure a deliberately high specific risk component on the basis of well-researched exposure to individual stocks.

The old saying that “the investment management process is more an art than a science” can be amply gleaned from my paper. In building a foundation, however, to maximise quantitative and qualitative capability, the question should not be: *How can the odds of achieving attractive returns be maximised?* but more: *What volatility are you prepared to accept in achieving desired returns?*

The answer will form the basis for creating a credible interface of quantitative and qualitative tools. Then perhaps fund management will be seen as neither art nor science, but as a subtle and complex piece of engineering.

Understanding some of the basic concepts of qualitative and quantitative management suggests the two are not mutually exclusive. There is often a clear overlap. Managers who are dealing with indexed products and/or futures, rather than the physical stock, are not necessarily being purely quantitative but they tend to recognise the difficulties of outperforming the broader indices when making investment within asset ranges. They still have to make asset-allocation decisions within a chosen management style but the implementation is non-specific, in recognition of the difficulties associated with qualitative judgements on specific stocks.

At the very least, the October “shakeout” will have taught all of us to question the management style behind the return or, to paraphrase a late, great US president, “ask not what your fund manager can do for you (maximising returns) but what you can do for your fund manager in defining the volatility (management style) which is appropriate in the pursuit of maximising returns.” □

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