COLLECTIVE insight

Contents

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ansies & Tegniek/Finance Week publish *Collective Insight* bi-nually on behalf of the South African investment community. The ws expressed herein do not necessarily reflect those of the blisher.

From the Advisory Committee

BY ANNE CABOT-ALLETZHAUSER
m Cubed Asset Management

WE NOW present you with the second edition of *Collective Insight*. We could-n't be more thrilled with the warm reception the publication has received to date.

We've received numerous requests from trustees, investors, universities and professional organisations for extra copies of our first issue, covering "Economics and Investing". This can only suggest that the journal is fulfilling its primary objective to provide a "showcase for the best research currently being conducted on asset management and consulting in South Africa".

By "integrating fundamental investment principles with best practice reality and cutting-edge thinking" the journal appears to have struck a chord with readers looking for something with more depth and educational value.

This edition focuses on the topic Asset Allocation. We asked our authors to explore a range of issues that not only set out some of the more complex debates relating to how asset allocation decisions are made but whether current practices aren't also due for a serious re-examination.

With more than 21 articles sent in for consideration, the selection task that faced the Advisory Committee was a formidable one. As with our first edition, each member read each article without knowing the author's name or company affiliation.

The fact that we ended up selecting two articles from one house – Cadiz – and that an article by one of our Advisory Committee members was initially deconstructed and then finally selected by the committee without them realising that the author was in their midst, clearly demonstrates that the blind selection process is indeed working.

We believe that the articles in this edition provide an excellent overview of the distinctive elements of the asset allocation decision – both the type of *strategic*, long-term asset allocation decisions that trustees, financial planners and investors have to make to achieve their long-term funding objectives and, the shorter term, *tactical* asset allocation decisions that are the hallmark of active balanced asset managers seeking outperformance over the immediate future.

The debates that follow address:

- Whether market timing in asset allocation really works.
- How to structure asset allocations to target inflation.
- How to allocate to asset classes that aren't completely transparent or valued daily.
- How to optimally rebalance asset allocation decisions over time.
- Whether the traditional practice of targeting an asset allocation that gives the highest return at the lowest risk is as meaningful as determining which asset allocation will leave investors with the least amount of regret.

We wind up the discussion with a summary of the range of asset allocation issues that the industry has yet to meaningfully tackle. The result is a coverage that's not only comprehensive but also thought-provoking on a particularly complex topic.

The topics of the past two editions have had the additional benefits of suggesting to us our next *Collective Insight* topic. We believe that the time is right to introduce the issue of the *Use and Abuse of Numbers:* in performance measurement, model building, data analysis, statistical analysis, graph interpretation, and so forth.

A number of our authors made insightful and critical comments regarding how the misuse of statistical information can account for a multitude of misinformation and misinterpretations in the investment arena. We believe this could provide a fascinating edition that could help investors identify some of the more glaring examples that we face in our day-to-day dialogue with the investment world.

We invite our readers to submit papers of research on this topic through the following e-mail address: acabot@mcubed.co.za. The deadline for submission for the next edition will be sometime towards end June.

We also welcome any commentary that you would like to extend on the articles presented in this edition. Please feel free to contact us at collective-insight@mcubed.co.za. ■

How to make a great bobotie

Finding the right mix

BY DAVID GREEN
Ipac SA

WITH the minimum of supervision I can make a mean bobotie. For the uninitiated, this is a traditional Cape Malay curried mince dish with a baked egg topping.

Now I don't mean that I can merely be trusted to follow the recipe. Quite the contrary; a really good bobotie involves a lot of tasting and testing. Just a little more curry. . . now add some more raisins – oops, too much chutney. Better add some more curry.

Well, arriving at an optimal asset allocation is a lot like making that bobotie. You could probably think of any number of similarities between the two exercises, but I'll deal with just

three. In culinary terms, they are:

- How important is the bobotie to the success of the meal?
- What equipment do we need to properly mix the ingredients?
- Which is the more important attribute: quantity or flavour?

So just how important is it to get the bobotie right? Well, mess it up and the guests will be pecking at slices of banana, coconut shavings and that funny tomato, cucumber and onion mixture all evening – no fun at all. In the asset allocation arena the answer seems a lot more elusive, thanks at least in part to a lot of misquoting of some very important research.

Back in 1986 Brinson, Hood and Beebower published their seminal paper on the subject, which elicited some surprise and even scepticism. As a result they continued their research and published an update five years later, which largely confirmed the results of their earlier study. Essentially, their findings suggested that more than 90% of the variability of a large investment fund's returns over time could be explained by the fund's asset allocation policy. But their conclusions were soon being erroneously applied to explain the differences in returns across funds and even to the absolute level of fund returns.

More recently, Ibbotson and Kaplan, who addressed each of the above issues, have resolved much of the confusion. They analysed 10 years of monthly returns data of 94 US balanced mutual funds and five years of quarterly data from 58 US pension funds.

And the answers they came up with were very interesting indeed. They found that asset allocation policy explained 90% of the variability in fund returns over time – as had Brinson and his colleagues almost 15 years earlier. However, they also found that asset allocation policy explained only 40% of the differences in returns across funds but about 100% (actually a little more than 100%) of the absolute level of fund returns.

So yes, on the basis of data from large US institutional funds it seems that getting the bobotie right could make all the difference between an enjoyable meal and a flop.

But what of our second question? What equipment should we be using to properly mix the ingredients? We could use the old spoon and elbow grease method; we could use the tried and tested bowl and beater approach; or we might be lucky enough to have one of those fancy mixer-mincer-shredder-liquidiser machines.

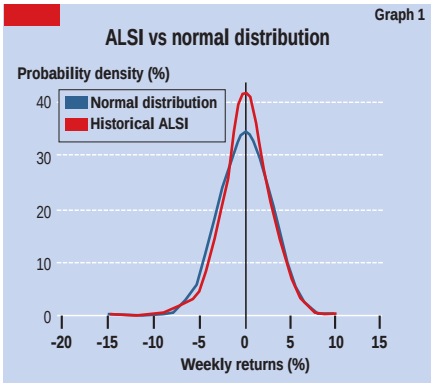
Well, asset class optimising is also done by any one of a variety of methods. We might just get away with checking what our competitors are doing and simply following suit. Or we might adopt the long-established "mean variance optimisation" approach. And I've recently met several advocates of something called "efficient frontier resampling".

I don't propose to deal with the merits and demerits of each of the various available statistical approaches. I want only to point out that while mean variance optimisation requires assumptions about expected returns, risks and correlations, other approaches require quite different inputs.

But how necessary is this facility? To what extent are the actual distributions of asset class returns different from normal distributions constructed using the same means and standard deviations? Graph 1 shows the distribution of weekly returns on the JSE Securities Exchange's all-share index over the past 40 years matched against the notional normal distribution curve.

From it you can see that the shape of

Graph 1

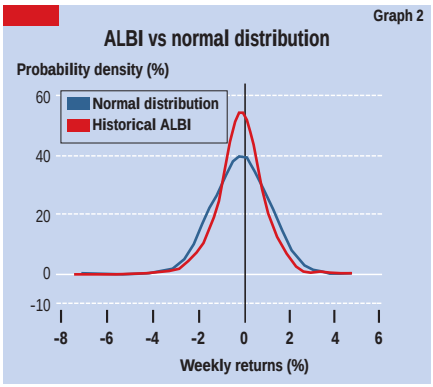


the two distributions is really very similar. The apparent differences are that "average" and extremely poor returns occur more frequently than predicted by the normal distribution. On the other hand, poor (but not extremely poor) and good (including extremely good) returns occur less frequently than the normal distribution would suggest.

Graph 2 for the all-bond index below is similar relative to its own normal distribution, except that all extreme events (high and low) seem to occur more frequently than the normal distribution would suggest. Of course, the further we stray from the mean the less data is available to estimate associated probabilities and the less dependable these estimates become.

However, there's enough research that suggests that "rare" events are less rare than the normal distribution would have us believe. In the past few years we've had the crash of 1987, the Asian contagion, the tequila crisis and the bursting of the tech bubble, to name but a few.

Graph 2



In summary, aside from relatively slight differences both the ALSI and ALBI have fairly symmetrical distributions, which diminishes the potential value added by an asset class optimiser that allows one to model nonsymmetrical returns distributions.

I suspect that devoting only time and effort in trying to model nonsymmetrical asset class returns distributions is unlikely to produce any appreciable improvement in asset allocations. It seems that relative to this particular alternative, there may yet be some life left in the tried and tested mean variance optimisation approach. And in the kitchen I'll still be sticking with my bowl and beaters for some time to come.

And what about our third question: Is it more important to prepare the bobotie with quantity or flavour in mind? Or in investment terms: Should we be optimising for a particular required return or a desired risk level?

Well, just as you would start preparing for a meal by considering how many people were coming to dinner so an asset allocation exercise should start with a number in mind. The number is the particular rate of return you intend to deliver to investors over time.

And in the kitchen I'll still be sticking with my bowl and beaters for some time to come.

Starting with a particular risk preference in mind seems to me a bit like mixing the curry, chutney and raisins to produce a hot or mild result before you've decided how much food you need. Much better to start by prioritising the achievement of a certain required return and then set about delivering that at the lowest possible level of risk. Not doing things this way may amount to giving investors what they want rather than what they need.

For example, let's take a case study of John and Jim. They're 45 years old, employed, married and each have two children. Then let's assume that we establish that John is a very risk averse investor and Jim is particularly aggressive.

Well, without further thought, if optimising for desired risk were our objective we'd probably give John a conservative portfolio stuffed with a lot of bonds and cash. And, we'd give Jim a portfolio heavily exposed to equities.

But now let's suppose that a proper financial needs analysis revealed the following: John is sending his children to private schools, replaces the German family car every three years and intends to retire at 55.

On the other hand, Jim is happy with the offering of the local Government school, replaces the rather average Japanese family car every seven years and intends to work until he's 65.

Now, all else being equal, which investor requires the higher return? John – and that despite being the investor with the lower desired risk exposure. The point is that the preoccupation of much of our industry with the risk preferences of investors – and the resultant approach to asset allocation – may be prejudicial to investors over the long term.

Far better for us as investment professionals to take the time and trouble to accurately establish the range of returns required by groups of investors – and to optimise for those returns – while keeping the implied risk level to a minimum. At least trying to give investors what they need, rather than what they want, is the financial equivalent of ensuring that when our dinner guests sit down at least there'll be enough food on the table to send them home satisfied.

With a bit of imagination we could extend the analogy of the bobotie and tease out a few more provocative thoughts. For example, dare I suggest that fiddling with the dish after it is placed in the oven is the culinary equivalent of an overzealous approach to tactical asset allocation?

But for now I'm feeling more than a little peckish – and dinner is calling.

Brinson, Gary P, L Randolph Hood and Gilbert L Beebower (1986). "Determinants of Portfolio Performance." *Financial Analysts' Journal* (vol 42, no 4; July/August; 39-48).

Brinson, Gary P, Brian D Singer and Gilbert L Beebower (1991). "Determinants of Portfolio Performance II: An Update." *Financial Analysts' Journal* (vol 47, no 3; May/June; 40-48).

Ibbotson, Roger G and Paul D Kaplan (2000). "Does Asset Allocation Policy Explain 40, 90 or 100 Percent of Performance?" *Financial Analysts' Journal* (vol 56, no 1.

DAVID GREEN

WHEN he's not cooking up a storm in his kitchen, Green is CIO of ipac SA. His primary investment interests are the development of real return targeting investment strategies and related asset manager research.

He holds BAs in psychology and law, an MBA in investment management from UCT's Graduate School of Business and a Chartered Financial Analyst awarded by AIMR.

He previously worked as a commercial and litigation attorney and has established and managed various businesses in the para-legal consulting, short-term insurance, stockbroking and asset management industries. ■

Asset allocation

The risk of underestimating its importance

BY ROB RUSCONI
SEI Investments

In March 2001, Paul Myners, a leading investment industry figure, completed a government-commissioned review of the institutional environment in Britain. His highly respected and influential report played a key role in helping the pension fund industry rethink its assumptions about what is required for responsible pension fund management. SA can learn a great deal from his study.

An important factor driving the structure of the investment consulting industry is the low level of resources committed to asset allocation by pension funds.

Myners' research showed that: "...asset allocation – the selection of which markets, as opposed to which individual stocks, to invest in – is an under-resourced activity. This is especially unfortunate given the weight of academic evidence suggesting that these decisions can be critical determinants of investment performance..."

He adds: "An important factor driving the structure of the investment consulting industry is the low level of resources committed to asset allocation by pension funds. They typically pay considerably more to have their securities portfolio actively managed than for asset allocation advice. Yet academic studies suggest that asset allocation plays a crucial role in determining investment outcomes."

That's intuitively sensible: the additional average annual performance that an asset manager might provide over a number of years, perhaps a couple of percentage points at best, is almost meaningless if the fund is substantially invested in the wrong asset class – for example, bonds instead of equities. We tend to forget this tenet in the noise produced by the consulting industry concerning performance – often short-term performance.

Not just a decision

Underestimating the significance of the decision is what leads to the commonplace and naïve 65/35 decision (65% to equities, 35% to bonds or cash). A more mature approach recognises that the decision forms part of a process that's intricately tied into a fund's objectives. Understanding these objectives is, in turn, not a simple exercise.

The goals of the asset allocation decision-making process are much broader than simply selecting the asset pots and deciding how much to put into each one. They require that trustees understand:

- the objectives of the fund from the perspective of funding, risk parameters, time frame and social responsibility initiatives
- what investment strategy would optimally address those objectives.
- the financial characteristics of each asset class and the role these play in creating a strategy that can weather changes in investment conditions.
- the limitations associated with each asset class in terms of permissible investment, the time and resources required for effective management, and related issues, such as liquidity, pricing and benchmarking
- the determination of reasonable performance expectations for these asset classes both individually and in aggregate such that dramatic short-term responses to disappointing market performances are avoided.

The process is directed not only to attaining the outcome of appropriately allocated assets but also to ensuring that this optimal allocation is maintained in perpetuity, by establishing a policy to rebalance between asset classes when market movements cause a natural change to the asset mix.

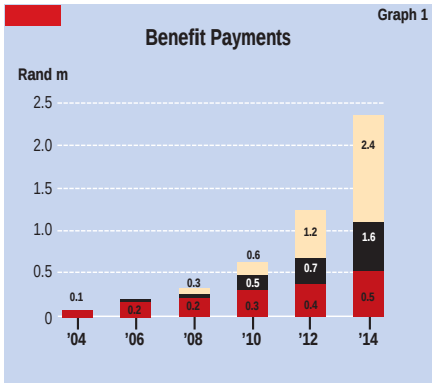
The role of asset/liability modelling

How do we set out to determine the best mix of assets? A key tool is the asset/liability model, which helps us to understand the relationship between the corresponding values of the assets and liabilities. This relationship is crucial: the solvency of a fund is dependent on the extent to which the assets exceed the liabilities.

The objective of the model is not to attempt to predict the financial condition of a fund but to understand how it might be affected by a variety of financial conditions. Repeating the calculations a large number of times, at the same time allowing these financial drivers to vary randomly, gives us an understanding of the "best estimate" outcome and the potential spread around that estimate.

The starting point is to understand the shape of the liabilities side of the fund. Graph 1 shows the projected cost of benefits and their potential spread, estimated over a 10-year period for an imaginary small, defined benefit fund. That's just one of the building blocks of the calculation process.

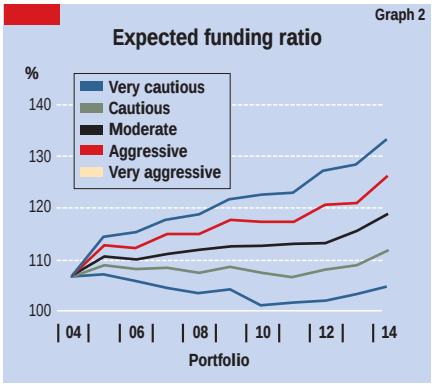
Graph 1



More important is a fund's overall financial position. Graph 2 shows how the expected future financial position is affected by the choice of assets. As illustrated by the chart, greater equity content leads to an improved financial position for the moderate portfolio but also a much greater spread of results across portfolios.

Though the process is not designed to provide easy answers, it provides a useful framework within which to develop a common understanding of the financial impacts of the asset allocation decision – and avoid common errors.

Graph 2



A case study with a difference

Asset allocation is not easy. Models that suggest that it is, should be viewed with a strong dose of scepticism. The results are sensitive to the financial assumptions behind the model and these must be developed with great care.

Nevertheless, the principles of asset/liability modelling are extremely useful and can be extended to address the interests of defined contribution funds, whose primary "liability" may be that the growth of their members' assets must exceed inflation.

Asset allocation is not easy. Models that suggest that it is, should be viewed with a strong dose of scepticism.

More recently, asset/liability modelling has been exploring ways in which asset classes such as hedge funds, private equity and, more relevant to SA funds, direct property holding, could be included in the modelling process. In these cases, even greater care needs to be taken to ensure that the inputs driving these models are sensible.

The problems with an asset such as property is its illiquidity. Returns are good, sometimes spectacular, but the asset classes are inherently lumpy. That not only affects valuation and transactions but also affects the way in which these assets included in any financial models.

Most financial models assume infinite liquidity and are a proxy for the complexity of the real world. However, in cases like these the approximation is clearly violated. These asset classes are affected by a characteristic of poorly traded asset classes known as "stale pricing". As accurate valuations aren't available on an ongoing basis, values appear to move very little, the volatility of the asset class tends to be understated and its correlation to other asset classes is also understated. Low correlation is good.

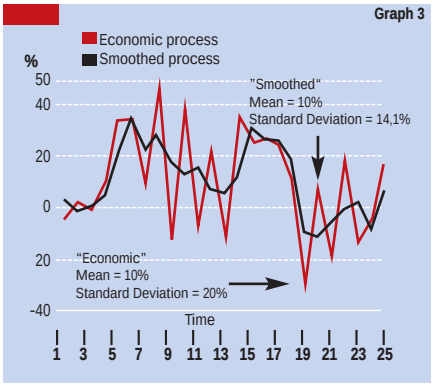
Direct property holdings and alternative investments, such as hedge funds, should be considered by funds large enough to invest in these classes without incurring significant costs; but computation of the optimal portfolios is not straightforward.

Asset classes such as hedge funds, private equity and property are useful components of a portfolio, but understating the correlations may result in an inflated allocation to these classes.

The technical problem that needs addressing is one of "unsmoothing" an artificially smooth series of values (see graph 3, which represents a generic asset class with lagged returns) – "putting back" the volatility that would exist if the assets were traded actively in a broad market.

In this case, simply using the available data would suggest a standard deviation of returns of 14,1%. The computational process, structured

Graph 3



essentially around decomposition of the auto correlations, or time lags, results in a more representative estimate of the standard deviation of 20%.

Adjustments like these are often overlooked but are a crucial part of the process if we're to understand the complexity of factors affecting the finances of a fund.

Direct property holdings and alternative investments, such as hedge funds, should be considered by funds large enough to invest in these classes without incurring significant costs; but computation of the optimal portfolios is not straightforward.

Think carefully and don't rush the decision-making

Asset allocation is probably the most important decision-making process in the management of a pension fund. SA trustee boards should be careful to apply their minds appropriately to the complexity of issues regarding asset allocation, understanding the objectives of a fund and the characteristics of the asset classes being considered and ensuring that a well-defined investment process is in place.

Calculation models should be well constructed and all inputs and assumptions rigorously determined. There's no substitute for sound analysis and careful consideration of all of the issues.

Myners, P (2001). *Institutional investment in the UK: a review* (Her Majesty's Treasury, UK). SEI internal study.

ROB RUSCONI

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Rob has worked for a variety of financial services companies, including Old Mutual, Sanlam, actuarial consultancy Hewitt Bacon & Woodrow and the Internet business of the London *Financial Times*. After leaving Sanlam he ran his own investment consulting business before joining SEI Investments. He's based in Cape Town but travels extensively.

He has a statistics degree from UCT and is a Fellow of the Institute of Actuaries. ■

Strategic asset allocation

Assessing probabilities of beating inflation-based return targets

BY JASON SWARTZ
Cadiz

Most strategic asset allocation decisions are predicated on the belief that investors are looking for that optimal asset mix that delivers the highest return at the lowest level of risk. But what if risk to an investor is not the usual volatility of returns but, rather, the risk of not beating inflation?

The gradual increase in the volatility of investment markets as well as the disappointing performance of traditional, equity-based benchmarks prior to March 2003 has meant that increasing attention has focused on simply beating inflation (i.e. achieving a real return). How does this different objective effect our allocation decision?

To begin the discussion, we review how managers have traditionally addressed these different performance objectives in their asset allocation decision. We then discuss the results of an empirical analysis, based on a data set that dates back to 1925, that is aimed at establishing the historical asset allocation compositions that beat inflation-based targets.

By examining the current asset allocation holdings of the global balanced and capital preservation pension fund managers, we then assess the implied probabilities of these fund allocations of beating inflation-based return targets, and extend this framework to establish historical optimal asset mixes for beating inflation and 'inflation plus' targets. We conclude with implications for strategic asset allocation.

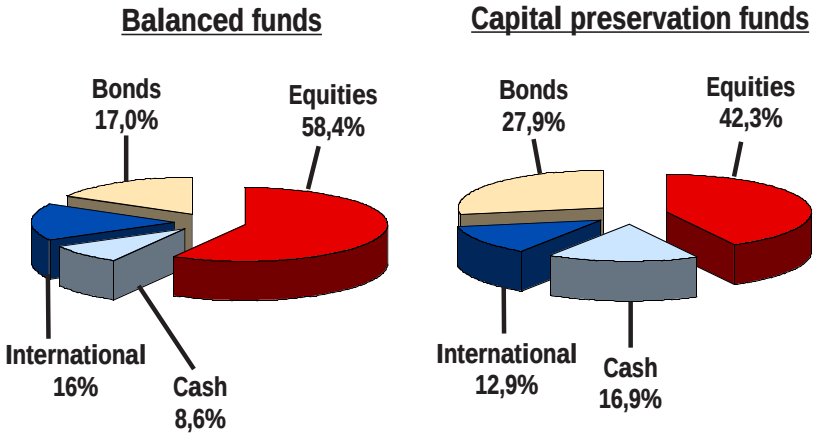
Asset allocation holdings of pension funds

The difference in the average asset allocation held by the Top 10 largest pension funds (global balanced mandate) and the capital preservation funds over the period December 2000 through to December 2003 can be seen in the pie charts. The data source is the Alexander Forbes Large Managers Watch survey.

Whereas the balanced funds are aimed at diversifying fully across all asset classes, the capital preservation funds are geared to have lower volatility relative to the market in order to protect the capital of the investor.

Graph 1 shows the average asset allocations of the balanced global mandate funds through time has been roughly 58.4% equities, 17.0% bonds, 8.6% cash and 16.0% international equity. In contrast, the allocation of capital preservation funds has averaged: 42.3% equities, 27.9% bonds, 16.9% cash and 12.9% international equity. Clearly there has been an intention by the capital preservation funds to have lower fund volatility given the lower exposure to equities (both local and international).

Graph 1



Probabilities of beating inflation

How effective would these asset allocations implied in the capital preservation pension funds have been at beating inflation? A comparison of their historic expected probabilities of beating inflation-based targets to that of the traditional global balanced funds proves instructive.

In our study, we performed a probability analysis (using a statistical technique called bootstrapping) on a data set extending to 1925 to estimate the chances of achieving specified inflation-based return targets. The methodology involves repeatedly and randomly sampling 36 months of asset class returns from the 948 sets of monthly returns (79 years). We computed the portfolio return and standard deviation of the two pension fund portfolios given their respective weightings in, and recorded these returns and standard deviations. Thereafter, we repeated this procedure 10 000 times in order to estimate plausible probabilities of performance for both portfolios historically in beating various inflation-based targets during the time period under consideration.

Given the historic inflation figures and corresponding asset class returns over the period of analysis, we show the resulting probabilities of beating inflation-based targets of the two funds in the following table.

What if risk to an investor is not the usual volatility of returns but, rather, the risk of not beating inflation?

Still focusing on the asset allocation debate, an additional consideration was whether it was possible to optimally construct asset allocation combinations yielding high probabilities of achieving inflation plus return targets.

Optimal asset mixes to beat inflation

Our study involved simulating as many combinations of asset allocations as needed, and performing the same bootstrapping procedure on each allocation. We then ranked these allocations into deciles, according to the probability of achieving any pre-specified target (e.g. inflation +2%). The aim of this procedure was to attain accurate estimates of the most probable asset mix of beating absolute return targets, based on the longest period of returns available.

We performed this analysis for 10 000 asset mixes, and computed these probabilities for the following targets: inflation +0%, inflation + 2%, inflation + 4%, inflation + 6% and inflation + 8%. We've constructed a stacked column graph 2 to illustrate the dynamics of each aggregate 1st decile (highest probability) aggregate asset mix for the five inflation based targets assessed.

It can be seen that as the inflation plus target increases, the proportion of equity increases in the asset mix, flattening off at 42.8% at the inflation +8% return target. This implication is intuitive, as theory suggests that equity represents the best asset class for beating inflation by a significant margin. A similar trend is evident if international assets are unconstrained, allocations increase to as much as 35.1% at inflation +8%.

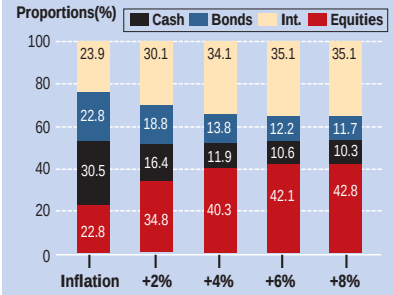
Significantly, these increased domestic and international equity exposures are primarily being funded more from the cash allocation than the bond allocation. This highlights the important role bonds play in achieving enhanced inflation plus returns.

Probabilities of aggregate pension funds in achieving

	Pension funds	
Inflation plus targets	Global balanced	Capital preservation
More than inflation +8%	44.2%	32.0%
More than inflation +6%	55.0%	46.4%
More than inflation +4%	64.4%	58.0%
More than inflation +2%	74.8%	72.0%
More than inflation (+0%)	81.8%	82.8%
Less than inflation	18.2%	17.2%

Graph 2

Portfolio targets... how the mix changes 1925 - 2003



Constraining international assets

The next step in the analysis was to refine our exercise to reflect the current constraint of 15% international exposure.

10

9 An interesting development here is that now the allocation to international equity averages around 9.5% (graph 3), with no definite trend through the various inflation-based targets. Local equities take up the majority of the forgone international allocation, dominating the 1st decile aggregate portfolios from the inflation +2% (45.6% equity allocation) to inflation +8% (61.5% equity allocation) return target.

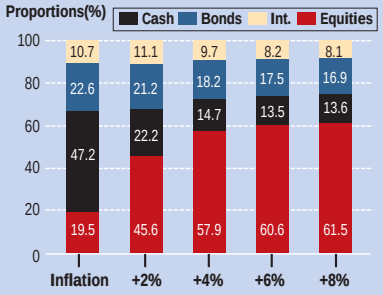
Once again, cash has been the primary funding vehicle, with the bond allocation remaining relatively stable in all inflation-based return targets.

Implications for asset allocation

The findings in this study intuitively suggest that lower inflation-based targets should encompass a significant proportion of fixed interest investments (primarily cash and to a lesser degree bonds), whereas higher inflation targets should be accompanied with higher proportions of equity and international assets. This result bears no surprise.

Graph 3

Portfolio targets... how the mix changes with international constraints (1925 - 2003)



The analysis also highlights the critical role played by international assets in capital preservation funds. A primary factor here has been the long-term lower volatility of international equity, its low correlation to local equity and local bonds, all coupled with a persistent historical depreciation in the Rand / Dollar exchange rate.

The analysis also supports the pivotal role of local bonds in portfolios aimed at achieving enhanced inflation based targets, as the allocation in bonds remained fairly stable in all the inflation plus portfolios (for both the constrained and unconstrained international analysis).

The analysis also supports the pivotal role of local bonds in portfolios aimed at achieving enhanced inflation based targets

But in the final analysis, the large weighting of local equity in the global balanced pensions (compared to optimised inflation-based funds) suggests managers' expectations of market conditions that can generate returns far exceeding inflation. While these assumptions may have historical merit for a long term, the lessons of the past have shown that similar assumptions cannot be made for short-term time frames.

As the inflation plus target increases, the proportion of equity increases in the asset mix, a similar trend is evident if international assets are unconstrained.

JASON SWARTZ

SWARTZ is a quantitative analyst in the Cadiz Quantitative Research team. He joined in November 2000 and specialises in the areas of portfolio optimisation, benchmarking and indexation, as well as areas of portfolio risk management and performance measurement.

He completed his Bachelor of Business Science degree at UCT with honours in statistics and finance in 2000 and in 2002 completed his Masters in finance. His thesis focused on the application of quantitative techniques for active portfolio managers. Swartz is also registered for his CFA. ■

Asset allocation

Understanding the nature of the assets

BY DEON VERNOOY
Quaystone

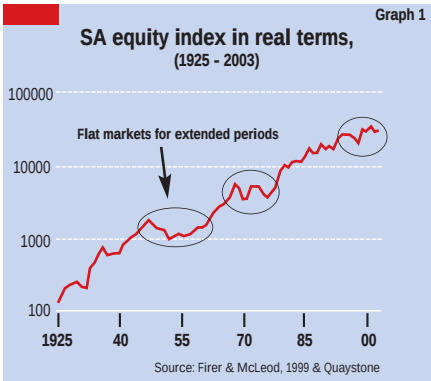
Getting to grips with the all-important asset allocation decision demands a thorough understanding of the nature of the asset classes that the typical long-term South African investor has at his or her disposal. There is probably no better starting point. In sum, we need to have an intimate insight into such relevant properties as each asset's return, volatility, downside risk and diversification potential. More importantly, we also need to have a feel for how stable these factors are or how often they have been subject to seismic changes. Each insight presents new possibilities but this is always in the context of old probabilities. The study below provides a preliminary introduction to the three dominant South African asset classes: equities, bonds and cash.

Equities…the volatile engine of growth

According to Sir John Templeton, one of the most prominent investors of our time, "…the true objective for any long-term investor is maximum total real return after taxes and inflation." To achieve this aim, many people will work with the notion that the best long run real returns will be gained by investing in equities. The long-term average real return on SA equities (close to 10%) provides support for this mindset. This would then lead to the conclusion that balanced portfolios, with a long-term return objective, need to hold the bulk of their assets in equities.

Still, the reality is that there have been 12 bear markets in equities (a decline of 22% or more from peak to bottom) over the past 80 years in South Africa. During these periods the average loss in the value of the equity investment was 37% and the maximum loss 62%. The average duration of these bear markets was 15 months. These numbers should leave most investors with some discomfort. However, others will respond by pointing out that despite these steep troughs the long-term return on the equity market was better than any other asset class.

Graph 1



Depending on the time horizon of the investor, the equity market can, however, become a rather depressing environment. Graph 1 indicates the predicament in which investors can find themselves when equity market performance lags the inflation rate over extended periods of time. On at least three occasions during the past 80 years the equity market has, for periods of 10 years or more, failed to outperform the inflation price index. This implies that the equity investment would not have maintained its purchasing power over these periods. The rather important matter of entry points is also evident from the graph. Investors entering the equity market in 1946, for example, would have seen serious erosion in the purchasing power of their equity investments for the next 10 years. One sincerely hopes that these were very long-term investors!

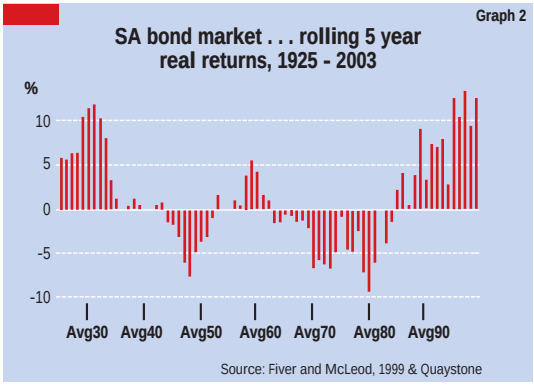
Bonds and cash…fewer sleepless nights?

The other main asset classes (cash and bonds) do not provide the investor with much comfort either when considered in terms of positive real returns. Graph 2 indicates the poor long-term inflation-protection provided by an investment in the South African bond market. Only during the periods around 1925-1935, around the 1960's and again from 1990 onwards, would the investor in the bond

market have been protected against inflation. However, in return for the low real return (on average 1.9% per annum since 1925), the investor would have gained the benefit of considerably less volatility than in the equity market.

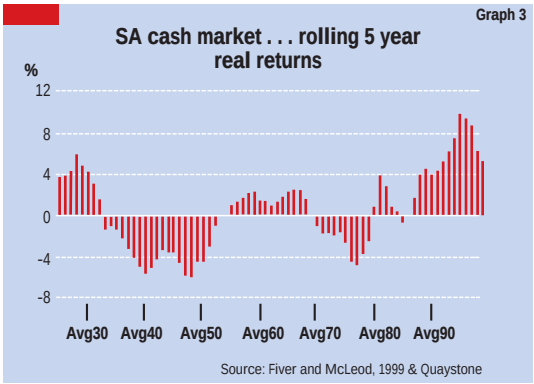
The traditional safe haven of the cash market lives up to expectations, but only when measured in nominal terms. Cash is the only one of the main asset classes that has succeeded in not delivering a negative return in nominal terms over any calendar year between 1925 and 2003. However, when measured in real terms the picture changes dramatically (graph 3): 40% of the time cash has not succeeded in protecting investments against the ravages of inflation, although it has been far less volatile than equities.

Graph 2



Source: Fiver and McLeod, 1999 & Quaystone

Graph 3



Source: Fiver and McLeod, 1999 & Quaystone

How to make sense of the uncertainties

At this point most investors would probably be inclined to resign the fate of their investment portfolio to the mercy of the gods, or follow the fatalistic approach of a Ralph Wanger (US fund manager) who said: "We do not know what will happen tomorrow, so we might as well think it might be nice." But alas, there are more uncertainties for the investor to deal with and the next section illustrates some of these.

The table indicates that the average rolling 5-year real returns on cash, equity and bonds were 0.6%, 7.9% and 1.2% per annum respectively over the period 1925 to 2003. It also indicates that a traditional balanced portfolio (65% invested in equity, 10% in cash and 25% in bonds), would have delivered an average real return of 5.8% per annum over rolling 5-year periods.

Averages, however, sometimes have the propensity to obscure the real facts. Observe the other statistics indicated in the table: Real equity returns varied between +29% over the rolling periods and –12% with a negative real return, 15% of the time. [Should one revert to annual return intervals, this percentage jumps to 33%, indicating the protection provided to the equity investor with a longer-term investment horizon.] Even if the investor followed the traditional "balanced portfolio*" approach the outcomes are anything but comforting: A maximum 5-year return (real) of 22.2% but a minimum of –9.9%; almost one in five times "balanced" investors would not have succeeded in beating inflation with their portfolio returns.

Various studies done in the developed markets (USA, UK, Japan) indicate that the real returns achieved in the SA financial market are comparable with returns achieved in those markets ; the notion that the returns vary considerably over time is also supported by these studies.

Despite all the caveats, the table should provide investors with a reasonable point of departure in their quest to gain an understanding of the nature of the available instruments. This could also be used as a starting point in estimates of future returns and thus as a basis for asset allocation decisions. A number of techniques can be used to refine these long-term averages, but that discussion falls outside the scope of this article.

Conclusions

Predicting the behavior of asset classes is not an exact science. It is only possible to gain a broad understanding of return and risk characteristics of the main asset classes. This should discourage overly confident approaches to predictions of future financial asset returns.

SA financial asset returns, rolling 5 year real periods, 1925 to 2003

	Inflation Nominal % p.a.	Cash Real % p.a.	Cash Nominal % p.a.	Equity Real % p.a.	Equity Nominal % p.a.	Bonds Real % p.a.	Bonds Nominal % p.a.	Portfolio* Nominal % p.a.
Average	6,1%	0,6%	6,7%	7,9%	14,1%	1,2%	7,4%	5,8%
Median	4,9%	0,9%	3,8%	6,4%	13,6%	0,3%	4,9%	5,6%
Max	15,8%	9,8%	17,9%	29,2%	38,9%	13,4%	22,3%	22,2%
Min	-2,8%	-5,8%	0,0%	-11,5%	-5,4%	-9,3%	-1,6%	-9,9%
SD	5,1%	3,8%	6,1%	8,3%	9,5%	5,5%	6,0%	6,1%
Neg Years	8	33	0	11	4	34	2	13
Neg Years %	10,7%	44,0%	0,0%	14,7%	5,3%	45,3%	2,7%	17,3%

* Balanced portfolio refers to a composition of 65% equity, 25% bonds and 10% cash

Source: Quaystone; based on work by Firer and Mcleod, 1999

Nevertheless, an understanding of the broad parameters within which these asset classes normally operate should improve the chances of making intelligent asset allocation decisions.

A firm understanding of the macro issues in the financial market environment may support profitable adjustments to asset allocations in investment portfolios. Look out for paradigm changes or clear examples of, as Alan Greenspan put it, "irrational exuberance".

Dimson, E, Marsh P and Staunton,M (2001). Millennium Book 2: 101 years of investment returns, ABN-AMRO/London Business School. Mehra, R (2001). Current estimates and prospects for change, Equity risk premium forum, November 2001, AIMR.

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Minimising regret

An alternative approach to controlling risk

BY HARINDA DA SILVA
Analytic Investors

Most asset allocation decisions are based on the assumption that the optimal allocation is one that achieves the highest return for least risk. By risk, what is meant is either variability of returns or loss of capital.

But studies of trustee behaviour suggest that it is often aversion to regret that dominates trustee decision-making. As such, we argue that a risk management process that can accommodate aversion to regret and variability in returns can lead to a more economically efficient investment decision.

Defining regret

The difference between regret and variability of returns is best illustrated with an example.

Imagine that you are part of an office pool and have bet on the number 26 37 44 15 33 51 every week in the State Lottery over the past six months.

Your adherence to this strategy fails to produce any winnings, and you decide to switch to 25 37 45 14 53 19.

The decision does not affect the risk or expected return associated with buying the ticket, so you switch numbers without discussing it with your co-workers. Imagine that, after switching, you find out that 26 37 44 15 33 51 wins.

Although switching had no risk or return implications, you realise that switching does affect regret. Regret is the pain that comes with the realisation that a decision turns out, ex post, to be bad. One way to avoid regret is to avoid choices. So, staying with the original number minimises the likelihood of regret.*

This same dynamic occurs when investors make asset allocation decisions. Deviating from the norm, as defined by a benchmark or other comparable funds, is a choice that fiduciaries often have to make. This choice and the responsibility bring the pain of regret when it turns out badly.

Aversion to regret often results in poor choices as it leads to a preference for staying with the benchmark portfolio or status quo. Rather than letting regret creep into the risk management process, we argue that it should be incorporated directly into the investment decision-making process.

Regret management as an investment strategy

Regret aversion or avoidance helps explain why many advisers extol the virtues of "dollar cost averaging" to clients instead of advising them to invest

all their money at once.

Figure 1 shows that the "average cost" approach results in no regrets. Regardless of the state of the market in following periods, investors who follow this approach have the benefit of always having some exposure to the best performing asset.

Even proponents of mean variance optimisation realise that regret has an impact on their investment decisions.

When answering a question about retirement planning put to him by Money magazine, Harry M. Markowitz said, "I should have computed the historical covariances of the asset classes and drawn an efficient frontier. Instead, I visualised my grief if the stock market went way up and I wasn't in it, or if it went way down and I was completely in it. My intention was to minimise my future regret.

"So I split my contribution fifty-fifty between bonds and equities."

Fig 1

Regret Analysis - Dollar Cost Averaging

Decision	Stock Market Performance	
	Positive	**Negative**
Invest Now	**NO Regret**	**Regret**
	I'm glad I invested	Should have stayed in cash
Invest Some Now,	**No Regret**	**No Regret**
Some Later	At least I got some invested	I'm glad I didn't put it all in

Regret, or potential regret, has an impact on the decisions of sophisticated and unsophisticated investors. It is a factor when making asset allocation decisions, evaluating managers, and in virtually all decisions made by pension funds. By defining regret, and selecting investment strategies that minimise regret, investors can make trade-offs between the dimensions that they truly care about - return and regret.

The next illustration shows how this process can be incorporated into the asset allocation decision.

Minimising regret using scenario analysis

Imagine a fund that has the following allocation and is considering changing to Option 1, Option 2, or remaining with the current allocation (Fig 2). The standard plan allocation used is based on the annual survey conducted by the US publication, Pension and Investments. By contrast, a South African pension fund would be limited to an international investment exposure of 15%.

In order to evaluate the merits of each allocation the likely performance of the fund in various economic scenarios is evaluated. The various scenarios, with corresponding asset returns are shown in figure 3:

The first scenario is based on the long-run premiums of each asset class over the risk-free rate. The second scenario corresponds to their typical performance in a deflationary environment. The low return scenario captures the mean reversion in return after the performance of the US equity markets in the 90s. The recession scenario is based on current economic expansion coming to an end.

These scenarios capture the set of most likely outcomes over a three- to five-year horizon.

Fig 2

Porfolio Weights

	Allocations			
	Current	**Std Plan**	**Option 1**	**Option 2**
Equities	40,0%	46,8%	30,0%	40,0%
Intl Eqty	15,0%	11,4%	20,0%	20,0%
Bonds	30,0%	27,8%	30,0%	20,0%
Intl Bonds	5,0%	3,8%	10,0%	10,0%
Real Estate	7,0%	9,7%	9,0%	9,0%
Cash	3,0%	0,5%	1,0%	1,0%

Fig 3

Return Scenarios

	Scenario			
	Long run	**Deflation**	**Low return**	**Recession**
Equities	13,3%	4,5%	3,2%	-5,7%
Intl Eqty	15,7%	4,5%	9,2%	12,5%
Bonds	6,3%	5,9%	0,1%	10,1%
Intl Bonds	6,6%	5,9%	10,5%	10,2%
Real Estate	8,2%	2,0%	12,7%	4,9%
Cash	5,0%	1,0%	6,4%	3,9%

We can now simulate the performance of the various allocations (fig 4), to assess their desirability. In addition, if a probability is assigned to each scenario, an expected return and volatility can be computed. For simplicity, we assume that each scenario is equally likely. The expected return and standard deviation for each allocation is also shown.

In general, this analysis favours Option 1, as it has the highest expected return and the lowest volatility. In both dimensions, it appears to be superior to the current allocation. It also appears to be superior to Option 2.

A trustee, based on this analysis, would likely choose Option 1 – with the nagging feeling that Option 1 has less equity exposure than the standard plan. This discomfort would likely manifest itself in the actual allocation being split 50/50 between the current allocation and Option 1.

But what if the fund focuses on the regret of underperforming to the standard pension fund? This focuses the allocation decision on outperforming the standard fund. The performance relative to the standard fund in each of the scenarios is shown in figure 5.

Both the current allocation and Option 1 result in regret in one of the scenarios - when returns match their long-run means. In contrast, Option 2 causes no regrets. While Option 1 has a higher expected return, it produces regret if returns are as forecast in the long-run scenario. Option 2 has a higher expected return than the current allocation and produces no regrets. For most sponsors, this would be the preferred choice.

The driving factor behind this finding was that Option 2 had lower "tracking error" to the standard plan.

This concept can be extended and employed in a formal optimisation process. We do believe, however, that we have demonstrated a different way of approaching and considering risk in the context of a pension fund. ■

Fig 4

Portfolio Performance

	Scenario Returns				Average	
	Long Run	**Deflation**	**Low Return**	**Recession**	**Return**	**Volatility**
Current	10,6%	4,7%	4,3%	3,6%	5,8%	3,2%
Std Plan	10,8%	4,7%	4,2%	2,4%	5,6%	3,7%
Option 1	10,5%	4,8%	5,1%	5,3%	6,4%	2,7%
Option 2	11,2%	4,7%	5,4%	3,7%	6,2%	3,4%

Fig 5

Potential Regret

	Scenario			
	Long Run	**Deflation**	**Low Return**	**Recession**
Current	-0,2%	0,0%	0,1%	1,1%
Option 1	-0,4%	0,1%	0,8%	2,9%
Option 2	0,3%	0,0%	1,2%	1,3%

*"Regret in Decision Making under Uncertainty," Operations Research, 30 (1982), pp. 961-981.

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Over his 20-year investment career, de Silva has authored a number of journal articles. He, along with his colleagues Roger Clarke and Stephen Thorley, was recognized with the prestigious Graham and Dodd Award of Excellence for their research. "Portfolio Constraints and the Fundamental Law of Active Management". ■

Asset allocation weights

Getting the balance right!

BY DAVE BRADFIELD
Cadiz

AS MARKET conditions change, a portfolio's proportions invested in the various asset classes are automatically changed by the relative return differences in the asset classes.

In the face of this investors typically have two choices:

- Let the portfolio's asset allocations drift on autopilot.
- Steer the portfolio on a course in line with intended target asset allocations.

Clearly, letting investment proportions drift – and in so doing riding the momentum of winning asset classes – has its benefits in terms of return. However, that needs to be weighed against the benefit of having rebalanced asset allocations when markets turn suddenly – as they always tend to.

In allowing a portfolio's asset allocations to drift, you typically find that the portfolio tends to become more risky. This occurs because asset classes with higher expected returns tend to have higher risks and, consequently, these classes will tend to grow faster than less volatile ones – hence the overall portfolio becomes more risky.

A recent innovation in the area of rebalancing asset allocation weights has been a promising framework proposed by Seth Masters (2003). The proposal is easy to implement and represents one of the few theoretical frameworks for considering the rebalancing problem. Here, we assess how this framework could be applied to the South African market.

Formulating the benefit of rebalancing

Masters points out that when a portfolio's asset allocation differs from its target allocation, tracking error (relative to the target) occurs. As tracking error variance has a quadratic form, the penalty rises quickly with divergence from the target (ie, you end up on the steep section of the curve).

A second consideration is the risk aversion of the investor. Masters argues that an investor who can endure higher risk may want to rebalance less often – hence the benefit of rebalancing would be smaller than for an investor who is less risk tolerant.

The cost of rebalancing is a further factor. Clearly rebalancing incurs direct trading costs and indirect market effect costs. For simplicity, Masters assumes that costs of rebalancing rise linearly with deviations from the target - but this assumption is more questionable in the SA environment, where effect costs may rise in a nonlinear way with the size of the trade. Hence adaptations to Masters' formulation may be worth considering for large portfolios.

Consequently, there are four important considerations for quantifying the net benefit of rebalancing:

- Tracking error.
- Percentage deviation from the target allocation (= Δ).
- Investor's risk tolerance (= K).
- Costs of rebalancing (= C).

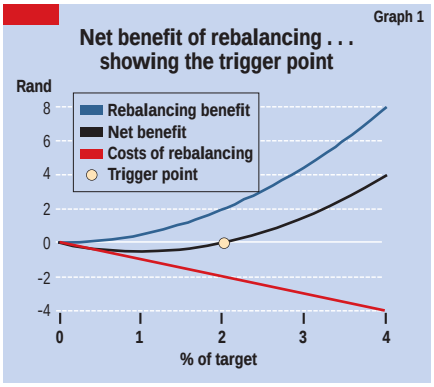
Masters puts these concepts together in a formulation capturing the net benefit by subtracting the cost from the benefit of rebalancing as follows:

$$\frac{(\text{Tracking Error})^2\,\Delta^2}{2K} - C\Delta$$

Where C is the total two-way cost of rebalancing an asset class (including the sale of the overweight amount and the buying of the underweight amount), including impact costs.

The tracking error term represents the tracking error between the particular asset class under consideration and the rest of the portfolio, excluding that asset class. It can easily be shown that by multiplying this expression by Δ^2 (the % off target) the numerator becomes the tracking error between the entire portfolio and the target/benchmark allocations.

The risk tolerance parameter, K, in the denominator essentially converts the expression into a quantity reflecting the regret for not rebalancing, or alternately the benefit from having rebalanced.



In allowing a portfolio's asset allocations to drift you typically find that the portfolio tends to become more risky.

In graph 1 the net benefit starts out in negative territory. This makes intuitive sense because for small deviations from the target the costs of rebalancing outweigh potential benefits. Thereafter the curve flattens and starts rising upwards – moving into positive territory. At the point of intersection with the x-axis the net benefit is zero and thereafter the benefits of rebalancing outweigh the costs. Thus the point of intersection yields the trigger point for rebalancing.

Determining the trigger point quantitatively

One can easily derive the expression given by Masters for quantitatively determining the trigger point T for each asset class by setting the previous equation equal to zero and solving the trigger point.

$$\frac{2K\,C_i}{\sigma_i^{\,2} + \sigma_j^{\,2} - 2\rho_{ij}\,\sigma_i\,\sigma_j}$$

where $\sigma_i^{\,2}$ is the variance of the returns of the asset under consideration,

$\sigma_j^{\,2}$ is the variance of the returns of the rest of the portfolio – excluding the asset under consideration,

ρ_{ij} is the correlation between the asset under consideration and the rest of the portfolio excluding the asset.

The formulation given by Masters contains interesting insights for rebalancing:

- More volatile assets (represented by σ_i^2) will tend to have lower trigger points – consistent with the intuition that it can hurt to be far off target for risky assets.
- Investors with higher risk tolerances (K) will tend to have higher trigger points – as they'll be less sensitive to deviations from target allocations.
- The more expensive it is to trade an asset (C) the further the trigger would be from the target allocation – consistent with the intuition that investors would want to rebalance the asset less often.
- If the correlation between the asset and the rest of the portfolio, ρ_{ij}, is high then being off target has less effect.
- However, if the correlation is low, the benefit of rebalancing is greater, hence the trigger point will be close to the target.

Computing trigger points

The equation for computing the trigger is fairly easy to implement, as it's based on inputs that are easily obtainable and observable.

Input assumptions and resulting trigger points

	Target Allocations	Sample Assumptions K	C_i	σ_i	σ_j	ρ_{ij}	Trigger Points
SA Cash	14,5%	5,0%	0,5%	0,8%	16,1%	3,0%	1,9%
SA Equities	57,8%	5,0%	1,0%	21,3%	5,3%	24,3%	2,3%
SA Bonds	15,3%	5,0%	0,5%	10,6%	15,4%	31,7%	2,0%
Global Bonds	2,5%	5,0%	1,5%	12,9%	14,2%	-17,7%	3,5%
Global Equities	9,4%	5,0%	1,5%	18,0%	14,5%	24,1%	3,7%
Property	0,5%	5,0%	1,0%	15,2%	13,8%	31,4%	3,5%

In the table we have used a risk tolerance of 5% for each asset class, Our remaining input assumptions are also seen in the above table

The table shows the resulting trigger points for a typical pension fund basing its target asset allocation on the aggregate Alexander Forbes Large Manager Watch (AFLMW) asset allocation.

In the table we've used a risk tolerance of 5% for each asset class. Our remaining input assumptions are also seen in the above table.

For example, for SA equities we've assumed a trading cost in or out of SA equities and into the rest of the portfolio (including effect costs) of 1%, a volatility of 21% and the volatility of the rest of the portfolio (excluding SA equities) of 5,3%.

With these input assumptions, the formula yields a trigger point for SA equities of +/-2,3 percentage points off the target allocation. With a target of 57,8% for SA equities the result suggests that the portfolio should be rebalanced if SA equities rise above 60,1% or fall below 55,5%.

It's also evident that SA cash has a relatively low trigger point of only 1,9% because it's relatively cheap to trade.

How far should one rebalance?

Some prior researchers have advocated rebalancing back to the target while others have suggested rebalancing only back to the trigger. But what's the optimal point we should rebalance to?

Clearly, if an asset class such as bonds is only slightly off target – the actual weight, say, is 16% and the target is 15,3% – it's not worth rebalancing because costs outweigh benefits.

For the same reasoning it's not worth rebalancing all the way back to the target – because if one views rebalancing as a series of incremental moves then the last few increments incur more costs than benefits. Thus rebalancing back to the target allocation cannot be optimal.

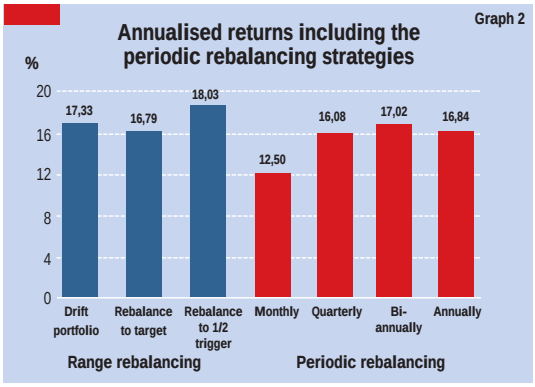
Interestingly, Masters shows that it's optimal to rebalance back to half way between the trigger point and the target asset allocation.

Empirical assessment

In order to test the theory we contrasted portfolios using a variety of rebalancing approaches over the period January 1999 to September 2003. As with prior studies of this nature we simplified our study by assuming a target mix of 50% SA equities and 50% SA bonds. We also took account of all transaction and effect costs in the analysis.

The graph 2 chart shows the annualised returns of several rebalancing strategies: a portfolio that's allowed to drift unrebalanced, a portfolio that's rebalanced all the way back to the target, a portfolio that's rebalanced only half way back to the target and four mechanistic periodic rebalancing approaches based on monthly, quarterly, bi-annual and annual rebalancing to the target.

Graph 2



It's evident that the rebalancing proposal that rebalances half way yields the best return of 18,03% net of all transaction costs. Also interesting is the result that the monthly rebalancing is the worst strategy over the period, having a return of only 12,5% – highlighting that rebalancing monthly is certainly not cost-effective.

Our study also confirmed that the proposed rebalancing policy of rebalancing half way between the trigger and target is also superior on a risk-adjusted basis.

An important advantage of Masters' proposal over traditional approaches to rebalancing asset allocations is that it's reactive to market conditions and eliminates the temptation to delay rebalancing. Its flexibility also incorporates the investor's risk preferences, actual portfolio compositions and risk characteristics of the asset classes, enabling the rebalancing policy to be tailored for each investor's portfolio.

Masters, SJ: Rebalancing. Journal of Portfolio Management (Vol. 23, no 3; 2003). ■

PROFESSOR DAVE BRADFIELD

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He's won awards for research publications in the journal De Ratione and was awarded the first "best research paper" award by the Investment Analysts Society. He's an associate editor of the multinational Finance Journal and a member of the Euro working group in financial modelling and the Southern African Finance Association. ■

Asset allocation

The key questions

BY ALEX PESTANA
Sanlam Investment Management

QUESTIONS concerning asset allocation are hard. What exactly constitutes hard? Clemen and Reilly delineate four elements: First, they're complex – often keeping all the issues in mind at one time, nearly impossible. Second, there's an inherent uncertainty in the situation. Third, most decisions involve multiple objectives, but progress in one direction may impede progress in others. Fourth, a problem can be difficult if different perspectives lead to different conclusions or if slight changes in certain inputs lead to different choices.

Asset allocation questions comprise all four elements. That some key questions are still debated with the ardour with which they were decades ago perhaps indicates that they're fundamentally insoluble or that they've chaotic elements that elude repeatability or systematic investigation.

For example, consider the efficient market hypothesis. Index trackers uphold it, while active managers and behaviourists do not. Within active managers there are those who confine themselves to bottom-up investing only, assessing tactical asset allocation a negligible source of performance. An opposite camp swears by top-down value-add. Numerous studies can be found to support both views. The question may remain insoluble, principally because of the hard decision element four above.

From the top-down perspective of investment strategists, operating as they do across the complete risk-return space, differences within asset classes and sectors are dwarfed by the spaces between them. Whereas retail analysts train their microscopes narrowly on the prospects for their companies, from the telescopic view of the asset allocator, the diversification benefits within the retail sector are comparatively minimal. The former profession distinguishes between addresses in Boston; to the latter, everyone in Boston lives more or less the same distance from everyone in Beijing.

The greatest investment service investment professionals and actuarial consultants can render is to design an asset allocation benchmark consistent with clients' risk/return profiles.

Strategic asset allocation

The selection of a target asset allocation consistent with an investment plan's long-term objectives is called strategic asset allocation. The greatest service investment professionals and actuarial consultants can render is to design an asset allocation benchmark consistent with their clients' risk/return profiles. That's no easy task, for three reasons:

First, whereas past returns is clearly understood, risk is a beast of multifaceted horns that continually gores the sharpest quantitative minds.

Neither do risk-adjusted returns do justice to the full compass of risk. Past returns are visible but the risks incurred in attaining those returns are opaque and not properly understood. The visible tip of the iceberg (return) is published in the newspapers but the underlying submerged ice body (risk) remains unseen – but not unfelt when it occasionally caves in under the investment ship and sinks it.

Second, the expectation of clients' return is often inconsistent and well above what can be reasonably obtained from a particular investment avenue. Ignorance of market dynamics, widespread advertising of high-flying funds' returns and the exaggerated claims of

some investment professionals continually fuel these expectations.

Third, client risk appetite doesn't remain constant for protracted periods and may change dramatically with life circumstances and employment prospects, let alone retirement. Today's labour markets are tenuous and fluid and what may have seemed like an appropriate investment model a year ago might be inappropriate today. Therefore, it's imprudent to classify people into the psychologically pleasing categories of risk-aversion or neutrality when their circumstances dictate a different risk course. Individual risk appetite is not constant but dynamic with market moves. People are much more risk averse after markets have fallen.

Tactical asset allocation comprises active changes regarding the strategic benchmark.

In this respect the investment profession has come a long way. Many pension schemes have widened their investment choices to include a wider asset allocation set. Some have adopted the life stage model, whereby an imminent pensioner is incrementally rotated out of a market portfolio into a stable portfolio over a lengthy period prior to retirement to minimise final payment risk, unless the member chooses otherwise. Those are sensible developments.

Because of the industry's focus on standard balanced funds and intra-asset class competition, a little creativity in strategic asset allocation can yield rich rewards. The introduction of inflation-linked bonds in SA gave product designers an opportunity to design inflation-benchmarked funds. Another development is the willingness of SA companies to raise finance by issuing convertible bonds. That's an exciting and complex asset class that will widen the scope of asset class choices.

As for the traditional 65/25/10 equity/bond/cash implicit benchmark of balanced pension funds, there are prolonged periods for which it's difficult to justify its constitution. It's certainly not been the optimal benchmark since the early Nineties in SA and people are starting to question its long-term suitability despite the recent gains in equity markets. However, there are moves adrift to align asset allocation more with the longer-term annuity nature of pension fund liabilities, even for portfolios that are not sensitive to such obligations.

On the other side of the coin, many investors make the mistake of adopting too conservative a benchmark at a stage where they should be gearing up on risk to build wealth. Clearly, the task here is to explain how the risk in asset classes fades away as investment horizons lengthen in well-diversified risky portfolios – provided there is a commensurate trade off of risk for return.

Tactical asset allocation

Tactical asset allocation comprises active changes regarding the strategic benchmark. Most contentious issues in asset allocation arise concerning tactical issues. In a sense, tactical moves are less engineered and more opportunistic in nature. The efficacy of the practice has been rigorously scrutinised. Many studies have shown that it's impossible to time the market – from which conclusions are drawn that tactical asset allocation is not efficacious.

However, that one carries out tactical asset allocation moves in time doesn't mean that you're timing the market. If you believe that markets overshoot from time to time, or that special factors at times drive markets away from fair value, then tactical asset allocation moves can add substantial value if you position yourself correctly.

Neither does the tactical asset allocator need to alter exposure to an asset class in one single move. Asset exposure could be staggered in stages during a prolonged bottoming- or topping-out phase. In so doing you don't time the market in the classical sense but change your tactical positioning as the risks or opportunities manifest themselves. Of course, you could be wrong in this as with any other investment decision – but not more or less so.

Consider the decision to take exposure to the US dollar or the euro in your overseas investments. Consensus has it that the dollar will weaken before it will strengthen, despite the superior strength of the US economy. The outcome may be impossible to foretell in the short run (say over the next month or so). However, given a horizon of two to three years or so the problem becomes easier.

There's a school of thought that holds inefficiencies in financial markets to exist in the longer rather than the short term, where arbitrage trades tend to operate more effectively given the better liquidity of near-term hedging instruments. That all makes tactical asset allocation a discipline of constant vigilance but discontinuous action, much like cricket but where you have to be alert between successive balls and overs. The trick is to get the odds in your favour.

If you guard against overtrading, tactical asset allocation can add substantial value when carried out judiciously.

Conclusion: In the final analysis the issues relating to all forms of allocation continue to be debated vigorously – as they should. With each day we inch that much closer to understanding what drives performance, how to deal with multiple timrframes, how to deal with multiple dimensions of risk, and how to deal with asset classes never before considered. We're still not there, but we must never stop questioning.

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