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Informing while challenging

BENCHMARKS: shun them, hug them or race against them, they're an indelible element of modern professional investment management. In this issue we've collected insights from throughout the industry to inform and challenge our views on benchmarking investment performance and its effect on manager selection and the investment process.

What better subject to introduce our new official sponsor ASISA – the recently formed body that represents the entire saving and investment industry in South Africa. It has among its stated objectives to work towards more level playing fields in our industry and you'll find plenty of like-minded contributors in this issue of Collective Insight.

All our contributors agreed on one key point: performance benchmarking in its current form could benefit from serious revision. Are we making wise decisions using historic benchmarked fund performance? Read Nicolas Davidson's article – "Perils of past performance" – for some good advice on how flawed the process is.

Are we using the appropriate benchmarks? Ron Surz, a veteran pension fund consultant and prolific author on the subject of indices and benchmarks, thinks not and encourages a review of benchmark construction as a "fiduciary imperative". Read his article – "Break ranks to differentiate skill" – for why he thinks benchmarks and indices have failed to differentiate skill among fund managers. Johan Swanepoel

adds his voice by highlighting the shortcomings of balanced benchmarks where pension funds are concerned and provides us with a potential solution in "The liability benchmark".

While benchmarks are used retrospectively they can also exert considerable influence on the investment process. Anne Cabot-Alletzhauser and Lynn van Coller add their insights to the extent to which a poor benchmark and mandate restrictions can collude to restrict investment performance. In "Uncovering the layers of noise that mask manager skill" Cabot-Alletzhauser suggests some useful procedures to distinguish skill and manager intent from luck and poor benchmarking. Coller highlights the resulting investment biases in SA's constrained environment by asking "Skill versus luck: should that be the question?"

Then Clare Johnson warns that the use of benchmarks as a yardstick for performance fees can inadvertently incentivise higher risk taking in "Benchmarks and performance fees".

Adrian van Pallander reminds us that fixed income requires specialised treatment in "Fixed income attribution in the investment process".

Finally, Roland Rousseau wraps up this issue by highlighting the important differences between alpha and beta as return sources defined by a benchmark. In "Dances with alpha" he asserts true excess active fund performance is being lost in translation. What do you think? ■

IN THE NEXT ISSUE

THE TOPIC for our next issue of *Collective Insight* is "Designing optimal solutions for long-term investing". In that issue we'll tackle the debates on:

- Whether pension funds or investors should employ single balanced managers, multiple balanced managers or multiple specialist managers to meet their long-term targets.
- Whether allocations that target long-term strategic asset allocations or ones that employ market timing of asset class allocations have a higher probability of delivering what investors want

- What really drives performance long term and how should the value add be properly assessed?

Authors wishing to contribute should vet their topic choices with us first to minimise overlap. Please contact Anne Cabot-Alletzhauser, on (011) 575-4333 with your topic ideas. Articles (approximately 1 200 words, plus illustrations) need to be submitted to matsholom@collectiveinsight.co.za by 30 January 2009.

Please remember this is a research publication and, as such, please no market commentary or marketing material. ■

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Nicholas Davidson
Alliance Bernstein

DAVIDSON joined Alliance Bernstein in 2005 as a senior portfolio manager: Britain, European and global value equities. He's a member of the British and European investment policy groups and previously worked at McKinsey. Before that he spent 14 years in Britain's public service, working mostly on trade and telecoms policy at the Department of Trade & Industry and (1994 to 1998) as first secretary, trade policy at the British Embassy in Washington DC. He holds an MA in history (Oxford) and an MBA (Georgetown University).

Perils of past performance

GIVEN THE SIGNIFICANCE of underperformance of active managers between 2007 and mid-2008 it would hardly be surprising if clients were questioning whether managers are worth their fees. A few may be ready to ditch the pilot. But are clients in danger of jumping to hasty conclusions? Given the complexities of assessing managers' performance sacking them may be satisfying but ultimately self-defeating. Academic studies suggest even experienced investors may not be very good at manager assessment.

Two American professors – Amit Goyal and Sunil Wahal – examined the selection and termination of managers for 3 700 US institutional funds over a 10-year period.¹ They found investors' tendency was to end the contracts of investment managers who had underperformed and take on managers who outperformed.

If, however, investors had stayed with their fired managers, outperformance would have been larger than that delivered by the newly hired managers. And that's before taking into account the costs of changing managers, which can be hefty.

So how much weight really can be put on the short-term – even medium-term – performance of professional investors? The evidence suggests caution is needed. This paper looks at some of the issues involved in interpreting the past performance of active equity managers and suggests it's essential to accompany quantitative analysis with qualitative assessment.

The past as a poor guide to the future
We looked at perfor-

mance statistics for a large number of active managers recorded on the database of consulting firm Mercer. We tracked the performance of the best-performing 25% for every rolling three-year period between December 1985 and December 2005. For those managing US shares, only 42% of the previous top quartile turned in a performance above the median performance in the following three years. Managers of non-US shares did slightly better, with 47% performing above the median. But the key point is in neither case did the managers' three-year track records provide a reliable guide to their future results.

Analyzing the problem

So given those limitations, how should you think about a manager's recent performance?

Targets

First, it's critical to remember a performance target represents only an average expected return. For example, take a manager claiming to offer a 3%/year return over rolling three-year periods. That means half the time the performance will range above that return and half the time it will range below. While, over time, the average return should centre on 3%, it can mean that over shorter periods performances can deviate sharply from that mean and still be in line with our 3%/year long-term returns.

Risk

A manager's returns can't be assessed without considering how much risk he's taking. Although there are many ways of quantifying risk, perhaps the most relevant is tracking error: a measure of how far a portfolio is deviating from the chosen benchmark, whether due to stock selection, industry weights or other factors.

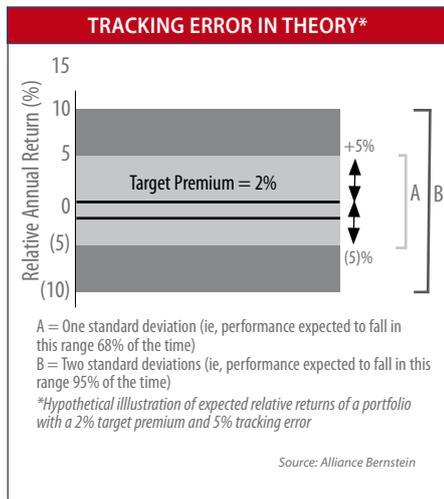
Tracking error measures the volatility of a portfolio's returns relative to its benchmark: in other words, it measures the consistency a portfolio hits its return targets. In statistical terms, that's the "standard deviation" of a portfolio's relative returns. It's normally used to measure how much risk a manager is currently taking. It can also be used to show how volatile the portfolio's relative returns have actually been in the past.

The way the maths works means a tracking error is expected to encompass a little more than 66% of outcomes. So a manager with a 5% expected tracking error who aims to generate 2% more than the benchmark should expect to produce a performance of between +7% and -3% in roughly two years out of three. For most of the rest of the time statistical theory suggests the outcomes should be covered by returns within two standard deviations from the target, from +12% to -8%. But in one in 20 years it would be perfectly normal to experience returns beyond those limits. (See graph).

Put another way, in any one year of a rolling three-year performance period, statistical theory suggests even a skilled manager with a target premium of 2% and an expected tracking error of 5% has about a 7% chance of producing a performance worse than -8%, relative to the benchmark.

In reality, managers' results only approximate that ideal picture, with extreme outperformance and underperformance happening more often than a statistical normal distribution would suggest.

The odds of any one manager beating the market consistently through luck may seem remote. Nonetheless, given the number of managers and strategies that have existed the odds of one or more



« lucky manager turning up with market-beating performances are much higher than you might think.

An analogy may illustrate the point. Imagine a Chinese coin-tossing competition. At the start of the year the entire Chinese population begins a competition in which each day its members pair up and flip a coin.

The winner goes through to the next round. The arithmetic means that, by end-January, the original 1,3bn field of contestants would be reduced to just 600 individuals who had never lost a toss.

At that point, one can imagine, there might be many who'd be willing to bet on the coin-tossing skills of those individuals in the belief they couldn't lose. Yet, in fact, even with the high odds against winning every toss (because there were so many taking part) a large absolute number of winners were bound to emerge.

Mediocre skill takes longer to confirm

So how can you tell whether your manager's outperformance is the result of skill rather than blind chance? The answer again lies in the theory of probability. If a manager has no skill then over long periods the premium the manager is able to produce will approximate to zero: deviations above and below the benchmark will result from chance rather than any systematic ability on the manager's part to outperform.

So testing for skill is essentially a matter of looking at a manager's actual returns against the returns that would be produced by chance. In statistical terms, if the manager's mean performance relative to the benchmark is more than two standard deviations above zero in a normal distribution of random returns at the same level of risk then you can be about 95% confident the results are down to skill, not luck. (Though, of course, it follows there remains a one in 20 chance that luck really is the explanation.)

But there's a complication. Over shorter periods pure chance means

many unskilled managers will produce outperformance, perhaps even quite high levels of outperformance (think of the coin-tossing example). As more time passes the probability of outperformance being the result of luck, not skill, reduces. And the higher the level of risk-adjusted outperformance the shorter the period of time needed to be confident that results are based on skill, not luck.

In statistical terms, the level of confidence in the results of the test described above depends on the number of observations on which the test relies – in this case, the number of years of performance data.

And, as we said, in judging whether a manager's performance reflects skill rather than luck it's not enough just to look at returns over time – we must also take into account the level of risk taken. Managers taking lots of risk – with big resulting deviations from the benchmark – will, over some periods, produce significant outperformance by luck alone. By contrast, more benchmark-hugging approaches will tend to produce more muted results.

To explain that we use the information ratio, the most generally accepted way of comparing the performance of portfolios with different levels of risk. It's calculated by dividing a portfolio's relative performance, in percentage points, by the portfolio's tracking error. The result is a measure of a portfolio's added value: a high positive number means the portfolio is adding a lot of return for each unit of risk taken. The length

of track record needed to be 95% confident that different levels of risk-adjusted outperformance result from skill, not luck. (See table).

Finding the answers

Our table clearly suggests a long

wait period. So how can you bring greater confidence to the process? How is it possible to tell whether a manager who has recently underperformed, lacks skill or is just going through a bad patch?

We suggest there's no substitute for detailed qualitative assessment to supplement the numbers. We think investors should ask the following key questions when assessing their managers:

- Does his philosophy exploit a consistent market anomaly?
- Does he have a rigorous process to exploit the anomaly successfully?
- Will that anomaly persist in the future?
- Is recent performance consistent with the manager's philosophy?
- Does he have the resources, including a stable team of people, to sustain performance?
- Has he taken on too many assets to manage for the strategy to continue to work?
- Does he adhere to high legal and ethical standards?

We can't guarantee a manager who fits all those criteria will leave a client ahead all the time. In fact, for the reasons discussed in this paper, we can be very confident that over many shorter periods he will not. But carefully assessing those qualitative criteria – rather than just looking at the numbers – is likely to produce much more satisfying results over the long term.

MEDIocre SKILL TAKES LONGER TO CONFIRM			
Information ratio	Illustrative tracking error (%)	Illustrative annualised outperformance (%)	Years needed for 95% confidence in skill, not luck
1,0	6	6,0	3
0,50	6	3,0	11
0,25	6	1,5	44
0,15	3	0,45	121

Source: Alliance Bernstein

References:

1. Goyal and Wahal, 2007: *The Selection and Termination of Investment Management Firms by Plan Sponsors*; working paper, forthcoming in *Journal of Finance*. ■





Ronald Surz
PPCA Inc

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Break ranks to differentiate skill

A RECENT, OFT-CITED STUDY found that consultants are actually worse at picking managers than do-it-yourself investors. Bergstresser, Chalmers and Tufano [2006], professors at Harvard Business School and the University of Oregon, documented that “financial intermediaries do a lousy job of allocating client assets to mutual funds”. Similarly, the press frequently observes the average fund-of-hedge-funds consistently underperforms the average hedge fund and that underperformance isn't due solely to fees. Simply stated, outside observers find professionals haven't delivered on their promise of finding skilful managers. The profession should heed that failure and take steps to change what's clearly been a losing game.

When data contradicts theory there's excitement about the potential to improve the theory. In this case it's traditional benchmark theory that needs improvement. The data shows indices and peer groups haven't succeeded in differentiating between winners and losers and we show why in this article. But we don't stop there: the literature is rife with documentation of the deficiencies of those benchmarks. This article describes how accurate benchmarks can be constructed from indices and how peer group biases can be overcome. Accurate benchmarking entails a lot of work but it's well worth the effort. If the benchmark is wrong – so losers are hired and winners are fired. It's time to break away from this loser's game.

Indices

A benchmark establishes a goal for the investment manager. A reasonable goal is to earn a return that exceeds a low-cost, passive implementation of the manager's investment approach, because the

investor always has the choice of active or passive management. It's important to recognise the distinction between indices and benchmarks. Indices are barometers of price changes in segments of the market. Benchmarks are passive alternatives to active management. Historically, common practice has been to use indices as benchmarks but returns-based style analyses (RBSA) have shown most managers are best benchmarked as blends of styles that may not always be apparent in the index.

The user of RBSA must trust the “black box” – because the regression can't explain why that particular style blend is the best solution. In his article that introduced RBSA, Nobel laureate William Sharpe [1988] set forth recommendations for the style indices used in RBSA, known as the “style palette”: “It's desirable that the selected asset classes be:

- Mutually exclusive (no class should overlap with another).
- Exhaustive (all securities should fit in the set of asset classes).
- Investable (it should be possible to replicate the return of each class at relatively low cost).
- Macro-consistent (the performance of the entire set should be replicable with some combination of asset classes).”

The mutually exclusive criterion addresses a statistical problem called multicollinearity and the other criteria provide solid regressors for the style match. Because the commonly used style palettes fail to meet those criteria the results can't be relied upon. In other words, the way we typically use this excellent tool is flawed. Using indices that don't meet Sharpe's criteria is like using low octane fuel in your high-performance car.

Though custom benchmarks developed through RBSA are more accurate than off-the-shelf indi-

ces, statisticians estimate it takes decades to develop confidence in a manager's success at beating the benchmark, even one that's customised. That's because when custom benchmarks are used, our assessments about manager skill are conducted across time. An alternative is to perform that test in the cross-section of other active managers, which is the role of peer group comparisons.

Peer groups

Peer groups place performance into perspective by “ranking” it against similar portfolios. Accordingly, performance for even a short period can be adjudged significantly if it ranks in the top of the distribution. When traditional peer groups are used, “manager skill” is tested by comparing performance with that of a group of portfolios that are presumably managed in a manner similar to the portfolio being evaluated, so the hypothesis is tested relative to the stock picks of similar professionals. That makes sense – except that someone has to define “similar” and then collect data on the funds that fit that particular definition of similar.

Each peer group provider has its own definitions and its own collection of funds, so each provider has a different sample for the same investment mandate. “Large cap growth” is one set of funds in one provider's peer group and another set of funds in the next provider's peer group. Those sampling idiosyncrasies are the source of well-documented peer group biases, including composition, classification and survivor biases. For a detailed discussion of those biases, see Surz [2006].

Because of those biases peer group comparisons are more likely to mislead than to inform and therefore they should be avoided. Given the common use of peer

6 groups we realise that position is an unpopular one; but sometimes- common practice defies common sense. (Think cigarettes). Such bias problems aren't solved by finding the "right peer group". Try as we may there's no way to make the biases described above go away. The most that can be done is to try to minimise the effects of those biases, which can best be accomplished with the approach described in the next section.

Unifying custom benchmarks with peer groups

Let's summarise what we've covered so far. Custom blended indices provide accurate benchmarks – but we have to wait decades to gain confidence in a manager's success at beating the benchmark. Peer groups don't have that "waiting problem" but are contaminated by myriad biases that render them useless. A solution to such problems is actually quite simple, at least in concept, but was only recently made practical when the requisite computing power became available. The solution uses custom benchmarks to create a peer group backdrop that doesn't have a waiting problem: that is, we know right away if a manager has significantly succeeded or failed.

To make this assessment we construct an approximation of all of the possible outcomes and determine where the actual performance result falls. That solution begins with identification of the best benchmark possible, such as a custom index blend, and then expands

that benchmark into a peer group by creating thousands of portfolios that could have been formed from stocks in the benchmark, following reasonable portfolio construction rules. That approach, illustrated in the following exhibit, combines the better characteristics of both peer groups and indices while reducing the deficiencies of each. (See *illustration*).

Importantly, statistical significance is determined much more quickly with this approach than with benchmarks, as inferences are drawn in the cross-section rather than across time. In other words, the ranking of actual performance against all possible portfolios is a measure of statistical confidence.

This idea isn't new – it's just not yet mainstream. For example, see Bridgeland [2001], Burns [2004] and Surz [2006]. Importantly, the technology has been extended to hedge funds, where traditional peer groups fail miserably due to the uniqueness of each individual hedge fund manager.

Hedge funds

Hedge fund due diligence can be distilled to two crucial questions:

- Do we like the strategy that this manager employs?
- Does this manager execute the strategy well?

The first question is typically difficult to answer, because most hedge funds are opaque – it's hard to figure out what they do. However, a basic tenet should be kept in mind: Don't invest in something you don't understand. Work being conducted in returns-based analysis of hedge funds helps to answer the first question about the form of the investment. For example, see Fung and Hsieh [2003], who demonstrate the beta of a specific hedge fund can be replicated with a long-short blend of passive portfolios such as exchange-traded funds (ETFs).

We shouldn't pay for beta, but its identification sets the stage for the second question regarding substance, or skill. As with traditional long-only investing, Monte Carlo simulations (MCSs) provide

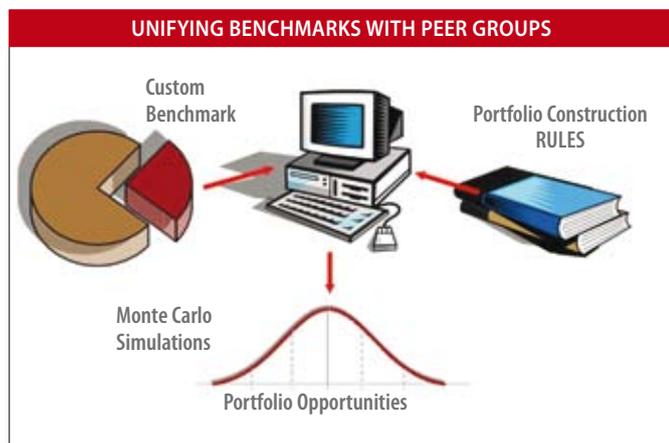
the answer to the question of manager skill. In constructing a specific custom peer group Monte Carlo simulations follow the same rules individual hedge fund managers follow in constructing portfolios, going both long and short, following custom benchmark specifications on both sides, as well as using leverage.

MCS addresses the unique challenge of evaluating hedge fund performance by randomly creating a broad representation of all of the possible portfolios a manager could have conceivably held following his unique investment process, thereby applying the scientific principles of modern statistics to the problem of performance evaluation.

That solves the major problem of hedge fund peer groups documented by Kat [2003] – ie, the members of hedge fund peer groups are uncorrelated with one another, violating the central homogeneity principle of peer groups. Some observers say it's good the members of hedge fund peer groups are unlike one another, as that produces diversification benefits. While it may be good for portfolio construction it's bad for performance evaluation. Funds in hedge fund peer groups shouldn't be compared with one another because it's like comparing apples and oranges. Hedge funds really do require not only custom MCS peer groups for accurate evaluation but also custom benchmarks that reveal both the longs and shorts, thereby estimating the hedge fund's beta. A ranking in a hedge fund MCS universe renders both the alpha and its significance.

Conclusion

Getting back to basics is more than just a good thing to do. Getting the benchmark right is a fiduciary imperative, an obligation. Even if you don't agree with this article's recommended best practices, you can't deny the failure of common practices. Something has to change. Current common practices aren't best practices: we can and must do better. ■





Johann Swanepoel

Sanlam Investment Management

SWANEPOEL joined Sanlam Investment Management in February 2002 and is a member of its SIMLab business unit. His responsibilities include various research projects, primarily in asset liability modelling and product development. He has 12 years' industry experience, with seven years in investments. He holds a BCom (insurance science) from the University of Pretoria and is a fellow of the Institute of Actuaries.

The liability benchmark

LET'S ASK A CRITICAL question: what really drives the long-term performance outcomes of retirement funds? What the academics will tell you is that, by and large, it is the strategic asset allocation decision and its commensurate benchmark that can account for as much as 90% of variability in performance. (Note that the answer is not manager's stock selection, sector rotation or market timing.) But, academic debate aside, if the strategic benchmark does have such an overwhelming influence on outcomes, shouldn't it be the most important discussion?

The goal

Let's take as given that the answer is affirmative.

The entire retirement fund industry exists to facilitate the process whereby individuals (or groups of individuals) save regular contributions throughout their working lives to secure an income from their savings after retirement. There are two sides to this liability. From the fund's perspective, its obligation (liability) would be defined as providing the benefit promised to the member. From the members' perspective, the liability is their spending requirement after retirement – ie, food, shelter, medical costs, transport, leisure, etc.

Loosely translated this sets the obligation as a set of future expected cash flows to the member. By defining the problems in these terms, it should be possible to place a market value on those

cash flows by discounting them using a suitable yield curve. That way of valuing cash flows is used every day in the pricing of bonds and life annuities, as well as in the valuation of defined benefit (DB) retirement liabilities worldwide.

One then addresses the investment management of this obligation by simply building a matching portfolio that meets the monthly cash flow requirements.

The liability benchmark

The liability benchmark is very much related to this concept of a matching portfolio. In fact, if perfect cash flow matching is possible the liability benchmark is nothing more than the index of the performance of the matching portfolio over time. However, in practice perfect matching isn't always possible, mainly due to a lack of very long dated instruments and you can expect a matching portfolio to deviate slightly from the liability benchmark.

Example

The best way to explain this concept is to look at a worked example. ABC Pension Fund is a closed DB fund with 1 000 pensioners. The rules of the fund guarantee an annual pension increase in line with consumer price inflation. By applying an appropriate mortality table to the actual fund membership you can derive a set of expected future cash flows for the fund. A current value can then be calculated by valuing the cash flows using an appropriate

real yield curve. (That's the same as constructing a matching portfolio of assets and then taking the market value of that portfolio. There may be a slight difference when the liabilities extend further than the available assets, in which case perfect matching isn't possible.)

The liability benchmark is then constructed over time by valuing the expected cash flows on a regular basis – say, every month using the latest yield curve.

The use

The main use of the liability benchmark is, of course, to keep track of the change in the value of the liabilities over time, and by comparing it with the change in the value of the assets you can easily keep track of the funding level (the ability of the fund to meet future liability cash flows).

As the liability index also represents the liability-matching portfolio it can be used to determine the total risk of the fund's investment strategy in relation to its liabilities. That's much more informative than the usual measure of active risk compared to a benchmark that has no relation to the liabilities. Here we have three different investment strategies relative to the liability benchmark. (Balanced, CPI+5% and cash). (See graphs 1 and 2).

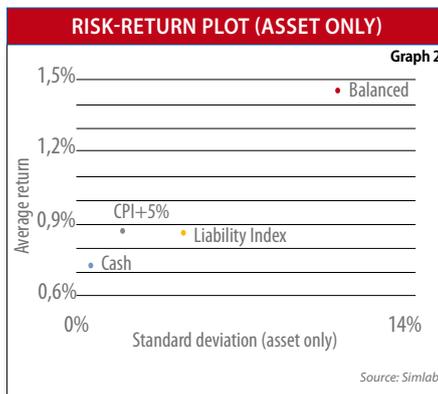
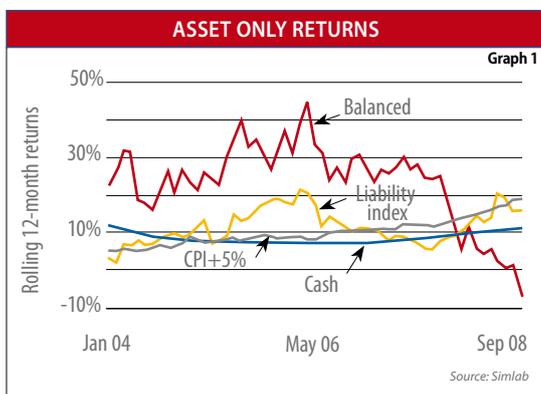
Absolute volatility (in asset-only space)

In absolute terms the liability benchmark can be quite volatile, as it's basically a type of long duration inflation-linked bond portfolio in this example. In absolute terms, cash is the "least risk" portfolio. (See graph 3)

Even though the balanced portfolio outperformed the liabilities for most of the period it's clear there's considerable risk in that strategy relative to its liabilities. (See graph 4)

Relative volatility (in asset-liability space)

If we now consider the performance »



« of the assets relative to the liabilities you can clearly see cash is no longer the least risk asset. The liability-matching portfolio (represented by the liability index) is the least risk asset as it moves to zero, while all the other portfolios move to a higher level of risk. Note that increase in risk isn't rewarded with additional returns, which is why it's often referred to as uncompensated risk.

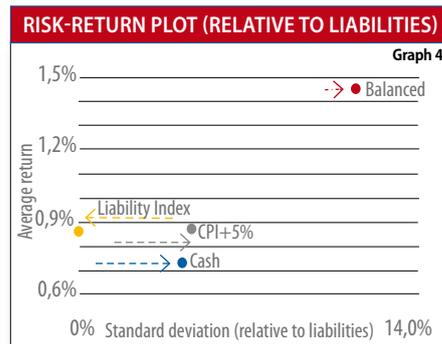
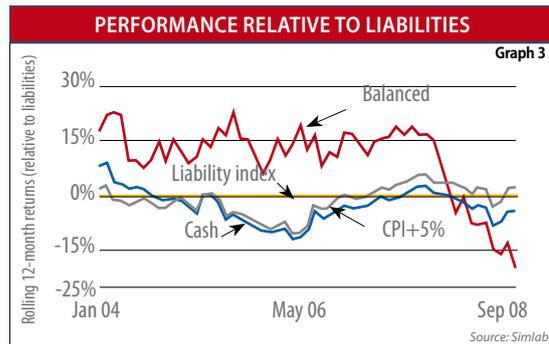
Funding level

If, for example, the last valuation of the ABC Pension Fund was done on 1 January 2007 and the fund was then 100% funded, how has the funding level changed over time and how well is the fund holding up in the current scenario? It obviously depends on the investment strategy followed by the fund. (See graph 5)

The liability benchmark can give the trustees insights into how well the fund performs between valuations, which enables them to act sooner when the investment strategy performs out of line of their expectations.

Conclusion

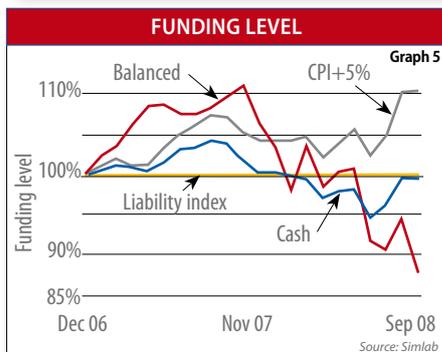
Liability benchmarks can be a very effective tool in the monitoring



and control of investment risk in many areas of investment – and especially in the pension fund environment. Their use isn't restricted to defined benefit funds but can also be employed by defined contribution funds, especially for those members close to retirement who will buy an annuity at retirement. In that case the liability benchmark will be a proxy for the change in the cost of annuities and will allow the member to monitor his investment performance relative to the change in the cost of retirement.

Even if you may not consider using a matching strategy in your overall investment strategy, it should be your point of departure from which you construct your optimal

portfolio. If you know the make-up of your least risk asset, you'll be in a better position to construct an optimal portfolio given your particular risk budget. The liability benchmark will also ensure you know how well your strategy performed against the liabilities and will serve as an early warning system if and when things start to go wrong. Keeping an eye on the liability benchmark will also give you a better insight into the factors that influence your liabilities, as well as a better understanding of the actual risk implicit in your strategy. ■



Uncovering the layers of noise that mask manager skill

I REMEMBER ONCE – 15 years ago – being asked by a financial journalist whether the investment industry couldn't just come up with a nice simple measure to assess manager skill. Two things are remarkable about that request. First, to give the journalist some credit, was the fact he recognised that simply looking at a manager's performance relative to a benchmark or even his peer group provided little insight – even if we could dig up a long enough track record to ensure some statistical significance. The second is that the request was made 15 years ago and we still, as an industry, haven't made much progress in delivering on that request.

That said, at a recent global round table for the CFA Institute (the worldwide body that oversees asset management qualifications and training) much was made of the fact that, while simple measures of skill still elude us, we now understand more than ever about what drives performance and how much "noise" exists in performance numbers. Ironically, the more we understand or "peel back" the more apparent it becomes as to how little information there is in performance numbers as a proxy for manager skill. Note that I haven't said managers aren't skilful – it's just that performance numbers do little to reveal its existence.

Now pause for just a second and consider how much value has been destroyed globally by investors chopping and changing managers because they didn't understand that critical fact. Trustees, investment committees and investors owe it to themselves to get a better handle on the facts. What follows is a compendium of fresh insights about performance that have emerged over the past few years.

Most benchmarks in SA or market-cap weighted benchmarks provide poor yardsticks against which to manage the skill
There are two dynamics at work



Anne Cabot-Alletzhauer
Advantage Asset Managers

Cabot-Alletzhauer is chief investment officer at Advantage Asset Managers. In SA she was responsible for pioneering the development of multi-manager management.

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here to create that phenomenon. To begin with, the manager portfolios we're discussing (unit trust or retirement fund portfolios) all must operate under fairly common regulatory constraints. Managers can only "go long" on shares, with "short selling"

Performance numbers do little to reveal skill.

still restricted in funds designed for the man in the street. The portfolios are required to be highly diversified, with maximum holding restrictions

of a typically constrained portfolio against a listed benchmark will be more driven by the nature of the market structure than by manager skill.

Let's illustrate with the following example: Let's apply a portfolio opportunity distribution modelling exercise to test how well several thousand iterations of portfolios randomly constructed out of the full set of shares available but within the portfolio construction constraints imposed by Reg 28 (which governs pension funds and the unit trust regulations would perform against the all-share or SWIX benchmarks.

manager skill – that explain performance. Against the all-share that phenomenon occurred in 11 out of 12 months in 2003. Tests against the more widely preferred SWIX, still suggests there's a dominant role played by market structure and not manager skill in nine out of 12 months in 2003.

However, in the 2007/2008 period to July the critical insight was that against the SWIX we could find only one month where manager skill could contribute above and beyond the combined impact of market structure and the normal regulatory constraints. (See table 1 and 2)

PROBABILITY OF OUTPERFORMING BENCHMARKS IN 2003

	Benchmark return ALSI (%)	Prob of outperforming benchmark (%)	Benchmark return SWIX (%)	Prob of outperforming benchmark (%)
Jan 03	-4,81	100	-4,09	98,10
Feb 03	-3,81	100	-4,71	100,0
Mar 03	-7,83	81,90	-7,97	99,20
Apr 03	-0,93	100	-0,27	80,90
May 03	14,87	0	14,10	0,00
Jun 03	-1,78	100	-0,77	100,00
Jul 03	5,93	0	5,00	85,40
Aug 03	5,57	0	5,00	0,00
Sep 03	-2,56	0	-1,89	94,10
Oct 03	10,13	0	9,70	0,00
Nov 03	0,44	100	1,62	12,00
Dec 03	7,30	0	6,97	0,00

Table 1
Source: Advantage Asset Managers

PROBABILITY OF OUTPERFORMING SWIX IN 2007 - 2008

	Benchmark return SWIX (%)	Prob of outperforming SWIX with not skill (%)
2007/02	1,34	97,50
2007/03	5,90	2,40
2007/04	4,66	100,00
2007/05	-0,19	99,80
2007/06	-1,77	4,00
2007/07	0,46	0,10
2007/08	0,81	0,20
2007/09	3,00	90,40
2007/10	6,81	1,50
2007/11	-3,31	1,00
2007/12	-3,54	100,00
2008/01	-7,01	0,00
2008/02	10,94	0,10
2008/03	-3,41	78,30
2008/04	3,92	0,00
2008/05	2,81	0,00
2008/06	-6,56	3,00
2008/07	-5,05	100,00
2008/08	1,26	100,00

Table 2
Source: Advantage Asset Managers

to ensure no portfolio becomes too risky at any point in time.

But the markets and their benchmarks (the indices) don't operate under similar restrictions. As indices ebb and flow, they can go through periods where performance can be highly concentrated in just a few isolated shares (while the rest of the market is actually heading south) or periods where shares all become highly correlated with each other. It's during those times of extreme structural anomalies in the market when the measurement of performance

We'll use two time periods to illustrate that point: 2003, when we had a sharp decline in the market until end-of April and then a rapid rise to year-end; and 2007/2008, when the markets were held in the throes of a resource rally until June this year.

The key column to note in the charts below is the probability column. Here we're assessing what probability those constrained portfolios would have had of outperforming either the all-share or the SWIX benchmarks over the periods. Note: That's without any assumption of manager skill at all!

The harsh message is that the combined interaction of the portfolio constraints with the specific circumstance of the market's structure over those time periods has meant that for the bulk of the time it's those two factors – and not

The issue of mandate constraints and their impact on performance isn't a trivial one

Possibly one of the best pieces of research to be produced over the past few years was a paper by Clarke, De Silva and Thorley in 2002 on the *Generalised Fundamental Law of Active Management*. The paper was instrumental in demonstrating to fund managers that even if they had perfect foresight, the normal array of constraints that unit trusts and pension funds must operate under means that, on average, only around 56% of that perfect foresight can actually get translated into performance.

Why that's the case requires a lengthy explanation that goes beyond the scope of this paper (see Lynn van Collier's following paper for further elaboration).

However, suffice to say that factor alone suggests most performance numbers are simply too limiting in what they capture to provide any insights about manager skill.

Worse, the fact that the long only constraint forces fund managers to reduce their positive views on large cap shares to fund their positive views on smaller companies can often mean that managers are more likely to unintentionally derive outperformance from what they aren't holding in their portfolio than from what they're overweighting in their portfolio.

« **Alpha opportunities aren't always available in the market – manager skill or no**

South Africa, as an emerging market, is often touted as providing better alpha generating opportunities than the more efficient developed markets of the US or Europe.

And although international research does suggest average alpha generating potential to be around 2%/year (against 1% to 1,5% for developed markets), one fact that investors fail to appreciate is that, again, as market structure changes, alpha can either materialise or de-materialise. Factors such as market concentration, volatility across different sectors or shares, the nature of market participants, regulations and the cost of trading can have dramatic effects over time on alpha availability.

Given those insights it stands to reason any assessment of manager performance has to be done within the context of how exactly did changing market structures influence a manager's ability to outperform or not – above and beyond the manager's skill.

Those influences can be extraordinarily broad – impacting all active managers (such as the problem of high levels of market concentration), or they can impact specific sectors or manager styles, such as the impact a high momentum market can have on a value manager. But, clearly, taking the time to understand those influencers provides tremendous clarity as to whether any active manager or a specific manager style could have produced outperformance under those specific conditions.

No single measure to determine skilfulness.

Assessing manager skill can't be done without knowing what the manager was actually trying to achieve

Let's assume we could find an appropriate benchmark for our manager and we removed any constraint that might interfere with the translation of that manager skill into performance.

We're still faced with the reality that only by knowing where the manager intended to add value before the fact can we assess whether he was able to skilfully translate it into performance.

Until recently, the best we could do for assessing manager skill was to apply multifactor models that allowed us to decompose both the manager's sources of risk (active bets) and the sources of return. If the two matched back to the manager's stated objectives we felt we could say with some confidence the manager had done a good job. But now thanks to Analytics the tools have evolved to help us make even finer distinctions.

Making the distinction between skill, success and luck provides the final critical step

Up to this point we may have been able to determine the manager was successful (ie, an active call in the portfolio translated into out-performance – after we removed all the issues of market structure, manager style and portfolio constraints), but we still don't know if they were skilful. How do we make that distinction? Skilfulness in a manager is determined when we've statistical significance that the successful calls are ones the manager can get over and over again with some degree of consistency.

There's an old adage in asset management that says the great thing about our business is that – whatever your current view might be on the market – eventually it will come right – if you wait long enough. It's the incredibly fortuitous, one-off calls by a manager that can carry performance through the stratosphere for a prolonged period we want to examine the most carefully, because those shouldn't necessarily be confused with skill.

Effectively, what we need to be able to do is to account for every single transaction and active bet the manager makes over time and weigh out two factors: what was the manager's hit rate (ie, how many of those calls did he get right) and how successful were each of those calls (on average, what quantum of performance did he produce?).

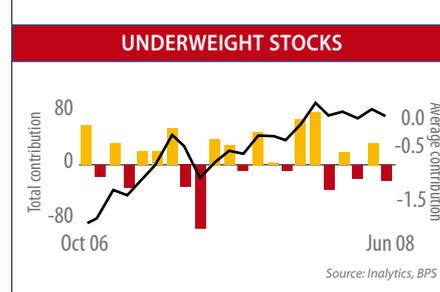
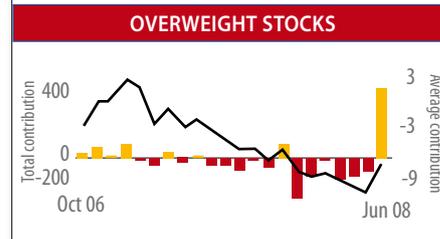
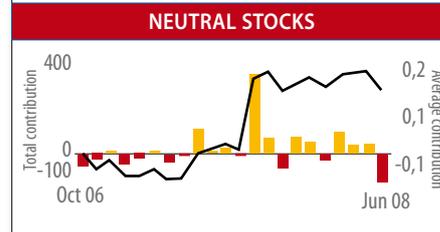
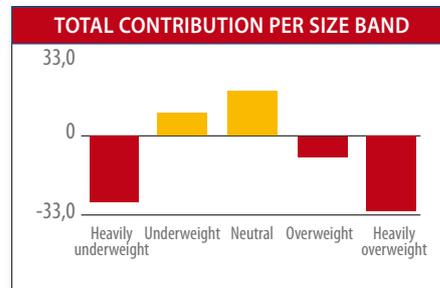
Let's take as an example a manager who declares he's benchmark agnostic. Add to that, he embraces a deeply contrarian investment strategy that he's forewarned could lead to long periods of under-performance but, so the marketing claim goes, it should be able to outperform in the long term. By combining both the hit rate and the quantum of success (the win:loss ratio), we can determine 1, whether the manager is delivering on his promise and, 2, whether the quantum of compensation adequately covers our requirements.

As table 3 illustrates, although the hit rate of this fund manager is significantly below 50% for the past three years, the win/loss ratio confirms the manager's own sense of his value add – that when he does score, he tends to score big. Are those scores enough to compensate the investor for the significant periods of pain the investor has to tolerate? Only time will tell and often time is the one luxury investors rarely afford their managers.

The graph would suggest while over time the manager may be able to score high enough on the win/loss ratio to compensate, the real problem is that there's tremendous inefficiency being experienced in the portfolio while the investor is waiting.

Active Bets	No of Observations	Hit Rate	Win Loss Ratio
Heavily Overweight	133	37,4%	140%
Overweight	289	46,8%	101%
Underweight	296	53,1%	100%
Heavily Underweight	94	42,1%	91%

Source: Analytics: BPS



13 Effectively, the manager only appears to be winning on those shares where they're either neutral or underweight. And he's losing not just on the shares where the manager has taken his long-term bets (those appear to start paying out in the last month) but he's losing across all fronts on the shares he heavily underweights.

Now all that's needed is for investment managers and their marketing departments to also understand them to stop the widespread masquerading of performance numbers as manager skill.

What such types of analyses can help us understand isn't only whether the manager has skill in identifying the right ideas but whether he understands portfolio construction principles well enough

to translate those ideas into performance delivery – no matter what the timeframe.

Summary

So, no Bruce – we still can't produce that single measure to provide critical determination as to whether a manager is skilful or not. But we've come a million kilometres down the road in our quest to understand:

- Why manager performance against the popular SA benchmarks provides little insight into managers' skills.
- Why we're rightly cautioned that past performance is no indication of future performance (and not because managers aren't skilful).
- How hamstrung managers are in being able to translate good ideas into performance.
- How having good ideas is only meaningful if the manager understands portfolio construction principles well enough to efficiently translate them into

performance.

For the first time, the tools we require to derive such insights are finally being developed and the academic world is responding aggressively with research to support those conclusions.

Now all that's needed is for investment managers and their marketing departments to also understand them to stop the widespread masquerading of performance numbers as manager skill.

References:

1. Clarke, De Silva, Thorley, Portfolio Constraints and the Fundamental Law of Active Management 2002.
2. See Cadiz – The Quality of Risk in your portfolio.
3. That risk-adjusted excess return that a manager can generate after removing the contribution to performance from the market's movement.
4. Source SEI, 2007 ■

Skill versus luck: Should that be the question?

MANY STUDIES HAVE BEEN conducted distinguishing manager skill from luck – most with inconclusive outcomes – and very few cases where skill can be identified with statistical accuracy. Even in South Africa, a number of asset management houses that provided good performance for a few years but then disappeared from the limelight or from existence – BoE, Norwich, Quaystone, to name just a few.

Part of the difficulty in distinguishing skill from luck lies in a disconnection that often occurs between a manager's views on stocks and financial markets and what's actually represented in his portfolio. That happens uninten-

tionally. Investment constraints are the main culprit, as they limit the manager's ability to express his view in the portfolio. But volatilities and correlations between stocks also play a part. That latter phenomenon is hardly ever mentioned and is the focus of this article.

First, a few definitions. The correlation between a manager's view and the active weights in his portfolio – that is, how well the portfolio reflects the manager's view – is called the "transfer coefficient" of the portfolio. Transfer coefficients vary between 0 and 1.* A low transfer coefficient means a large portion of the risk in a portfolio is in fact random and hence there's little connection between

the manager's view and the final return on the portfolio.

For a transfer coefficient of 0,5 only 25% of a portfolio's return variance is related to skill (see C Holt, 2007). If the transfer coefficient is lower, then even less of the return variance can be attributed to skill with any degree of statistical accuracy. That is: for low transfer coefficients you'd need many years of data – longer than the average portfolio manager's working career – before you could distinguish between luck and skill.

What that means is if your manager has good performance over a period but a low transfer coefficient, then you have no way of predicting whether his good performance



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is repeatable. If the manager has a high transfer coefficient you can be more confident his good performance is due to a correct view and is repeatable as long as skill persists.

Constraints are the main causes of low transfer coefficients. The long-only constraint has the greatest consequences but sector limits, maximum position sizes, liquidity and turnover constraints also play a part. The long-only constraint means that negative views in particular are hard to express in smaller stocks, as the minimum holding in a stock is zero and, hence, the maximum underweight is the size of the stock in the benchmark.

Because there are only a few large stocks in our concentrated indices that restricted ability to underweight stocks also affects the extent to which a manager can overweight other stocks, as the active weights need to sum to zero in a long-only portfolio.

Most discussions that lament the problems of low transfer coefficients focus only on the long-only constraint and go on to promote investments in short extension (120/20, 130/30, etc) portfolios, as they largely remove that constraint.

But what about improving transfer coefficients of long-only portfolios? That question is hardly ever asked. It's assumed managers are transferring their views accurately – but that's often not the case.

Again, the reason isn't intentional. The culprit is the non-linear nature of risk and the correlations

between stocks that together mean total portfolio risk isn't just the sum of the risks of the underlying stocks.

In the words of Robert Litterman, of Goldman Sachs: "...the art of successful portfolio management isn't only to be able to identify opportunities but also to balance them against the risks that they create in the context of the overall portfolio". Since the transfer coefficient measures the correlation between risk-adjusted alphas and the active weights in the portfolio, in order to maximise that transfer we need to pay attention to both risk and return.

By way of example let's go back to the problem of our concentrated index. A paper by Bradfield and Munro showed most asset managers in SA systematically underweight large cap stocks in order to overweight mid and small caps. But what if a manager has a positive view on large caps? Underweighting them contradicts his view and, to make matters worse, large caps are quite highly correlated. The manager ends up concentrating risk in a view he doesn't hold.

Another example involves exposure to the rand. A manager could be negative on resources stocks but expects the rand to devalue. To reflect both views he'll need to ensure he's sufficiently overweight in the rand-sensitive Findi stocks to counteract the rand view expressed in the RESI underweight. That's not straightforward, as stocks have different sensitivities to the rand and to each other.

The need to balance risk and return to improve the transfer coefficient is clear. However, it's not that easy in practice – which is why it has been somewhat ignored in constructing long-only portfolios. However, over the past decade or so new methods have been developed overseas, specifically by Goldman Sachs, but others have added to the research, which do give intuitive and more stable results. They're mathematically intensive but the benefits make the investment worthwhile.

Consider the Fundamental Law of Active Management, which says the information ratio (outperformance or alpha relative to risk) is proportional to the product of the information coefficient (the formal measure of skill) and the transfer coefficient[#] (see illustration).

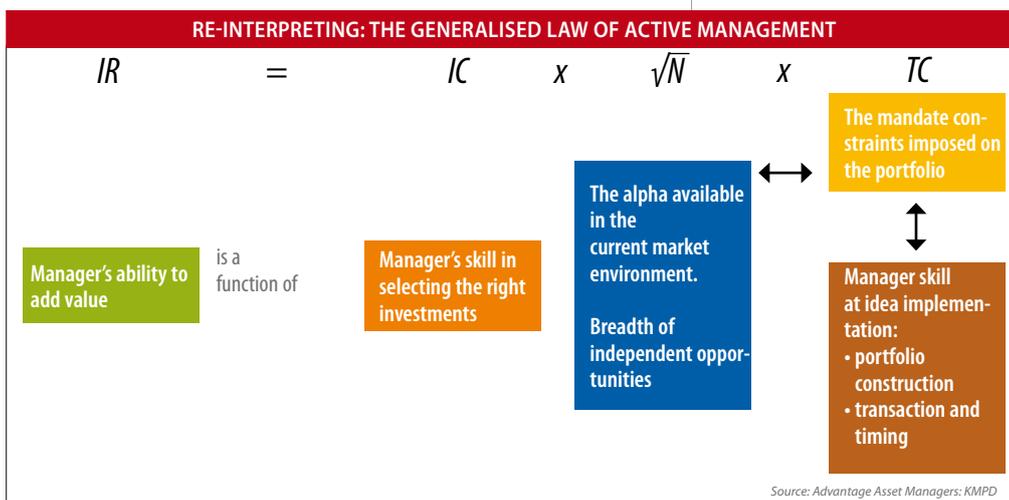
Both quantities have equal weight in the equation, hence the same importance in determining the final risk-adjusted performance of the portfolio. While skill can only be improved incrementally – and subject to all the difficulties that go with predicting the future – the transfer coefficient can be improved by 20% to 30% if attention is paid to ensuring the efficient transfer of both expected return and risk into the portfolio. Clearly a worthwhile investment.

We'd all like to know which managers have skill and which have just been lucky. But until we can be sure managers are transferring their views into their portfolios the answer to that question is likely to remain elusive.

** Negative values are possible but would mean the manager is structuring his portfolio contrary to his view!
I've deliberately excluded a discussion on breadth, as breadth tends to vary with investment style: value managers tend to have lower turnover than momentum managers while the IC and TC can be applied to all types of managers.*

References:

1. D Bradfield and B Munro, Cadiz Securities, *The Quality of Risk*, Nov 2006.
2. C Holt, *Fundamentalism in Asset Management*, Jan 2007. ■





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Benchmarks and performance fees

THE ROLE OF BENCHMARKS in portfolio management and performance measurement is regularly discussed but it's less frequent to see a discussion of the impact that benchmark choice has on the fees an investment manager collects from his clients. The part of manager fee structures that's impacted by benchmark choice is performance fees, since those are usually levied on excess performance relative to a pre-specified benchmark.

In his paper *Evaluating Benchmark Quality*, Jeffrey Bailey states that a desirable benchmark should have, among other things, high overlap with the manager's portfolio, high power (in the statistical sense) to explain the portfolio's returns and a structure that reflects the manager's style bias. So when the style is outperforming the market so too should the benchmark. Moreover, whether or not the manager can beat the benchmark shouldn't be dependent on whether or not his particular style is in favour. A portfolio managed to a high quality benchmark will have lower tracking error than when the tracking error is measured against the market portfolio.

It's those characteristics when viewed in combination that are relevant in the context of the performance fee debate. Not only should the constituents of the benchmark represent the universe in which the manager intends to play but the risk characteristics of the benchmark – determined by its constituents, composition and style bias – should also bear a relation to the portfolio the investment manager intends to construct.

Investment management fee structures typically have two parts:

- A base fee: that's an essential component of the fee structure.

If the base fee is too low the presence of a performance fee may give the fund manager incentives to assume unnecessary risks in order to achieve a higher level of fee income, or even to cover the daily running costs of the fund.

- An optional performance or incentive fee, usually defined by the benchmark or hurdle rate against which the manager's performance will be measured and the participation rate (the percentage of the performance above the benchmark that the manager will keep).

The performance fee benchmark or hurdle rate may or may not be different from the benchmark against which the manager runs his fund. Performance fee structures are most common in the hedge fund world, can be found in some pension fund mandates and are becoming increasingly prevalent in certain categories of collective investment schemes aimed at retail investors.

The hedge fund and segregated investment performance fee is usually perfectly fair, in the sense that the investor doesn't pay more performance fee than is justifiable in terms of the rand excess performance earned on his investment. That's possible because there's usually a small client base and fixed investment/redemption dates (in a hedge fund) or a single client (as in the case of a pension fund), making the application of a high water mark feasible. That prevents an investor from paying more than once for the same excess performance (for example, for retracing performance lost in a prior period of underperformance).

Managers who want to levy performance fees on their unit trust clients are faced with unique challenges. While it's easy to calculate

the excess performance earned against a benchmark between two specified dates, it's less easy to ensure investors aren't prejudiced or advantaged on the basis of the net asset value when they invested. It's impossible to track the units held by individual investors in the same way an administrator tracks the individual series of the investors in a hedge fund, thus rendering high water marks impracticable for a collective investment scheme. The nature of the benchmark and the method that fees are levied become essential in that situation.

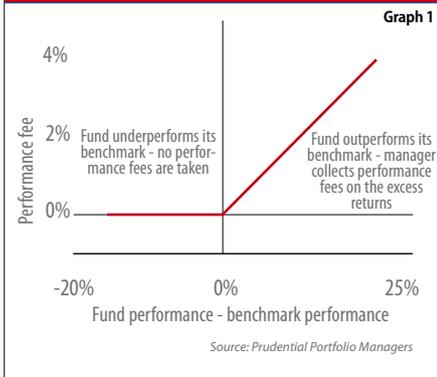
The vagaries of performance fee structures are the subject for another discussion: what we'll consider here is the choice of an appropriate benchmark.

It's well known that a standard performance fee structure can be thought of as a call option on the performance of the fund. If the fund underperforms the benchmark, the manager is not penalised; but if the fund outperforms he collects 20% (say) of that excess performance as fees.

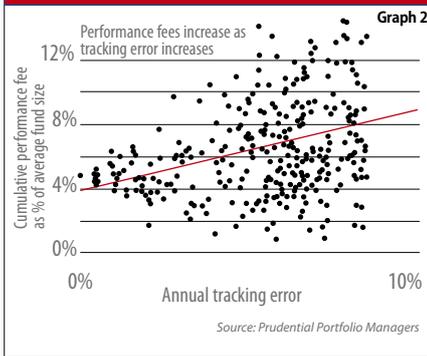
The strike price of the option is the benchmark performance or hurdle rate; the term is the measurement period over which excess performance is calculated; the underlying instrument is the fund's performance; and the volatility is the volatility of the difference between the fund's returns and its benchmark – in other words, the tracking error of the fund. (See graph 1).

Vanilla call and put options increase in value as volatility rises, essentially because extra volatility in the underlying instrument increases the probability the option will be in the money at the end of its term, making the option more valuable. The implication is that the long call option the fund manager holds on his fund's

PERFORMANCE FEES AS A CALL OPTION



RELATIONSHIP OF PERFORMANCE FEES TO TRACKING ERROR



excess performance will increase in value with increasing tracking error to the performance measurement benchmark.

By simulating the behaviour of a fund manager who adds constant alpha but with varying levels of tracking error to his performance measurement benchmark, you can illustrate how the total performance fee take increases as tracking error (volatility) increases. The range of performance fee outcomes also increases, because with added tracking error comes added opportunity to underperform the benchmark.

In this simulation performance fees are levied on rolling 12-month outperformance of the benchmark, with no high water mark: consistent with many unit trust fund incentive fee structures. (See graph 2).

It should be noted at this point that you expect a relationship of

that kind between incentive fees and tracking error and there's nothing wrong with a manager running his fund at a certain tracking error level because it's what he does or in order to comply with his mandate.

However, what is of concern is the practice of using your equity benchmark to manage an equity fund and another to measure its performance – and thus artificially inflating tracking error. An example would be a manager with his unit trust fund in the general equity category that manages his fund against the SWIX but calculates performance fees against the all-share index.

Though that may seem like an innocuous difference that isn't significant to clients of the fund but a general equity fund may have substantially different tracking error to the SWIX than it has to the all-share. Typically, if the manager is using the SWIX as his normal portfolio, the fund's tracking error against the ALSI will be higher. The manager thus takes advantage – knowingly or unknowingly – of that mismatch when reaping performance fees, as the extra volatility boosts his probability of ending the performance measurement period in the money.

The astute reader will have

observed many hedge funds use decidedly non-volatile performance benchmarks or hurdles – cash or CPI+X% being examples. To reiterate, the signal difference between the hedge fund incentive fee structure and the structure that's possible in a unit trust fund is the high water mark. Use of a high water mark ensures while tracking error to the performance fee benchmark may be extremely high that error does not translate into extra fees.

Having identified the problem – excess volatility introduced into the incentive fee structure through mismatch of fund management and performance measurement benchmarks – we conclude with a recommendation. The possible variations in fee structures are endless. The issue we've dealt with here may seem trivial but it's for precisely that reason it often goes unnoticed. Time spent scrutinising any incentive fee structures to which your fund is subject won't be wasted. As with all commodities, it's important to understand what you'll be paying for – and when.

References:

1. Bailey, JV. Evaluating Benchmark Quality. Financial Analysts Journal. 48(1992b): 33-39. ■

Fixed income attribution in the investment process

PORTFOLIO PERFORMANCE measurement tells us how a fund has done historically and what the level of performance relative to the benchmark has been. It's the quality control element of the investment process and provides clients with the necessary information to accurately assess the results of that process.

However, performance measurement doesn't tell you how the returns were generated. Outperformance may have been the fortuitous combination of investments that didn't form part of a rigorously defined investment process.

If a manager's performance were random (ie, luck) we wouldn't expect that performance to be replicated in subsequent years.

Consequently, you'd want to ask if there was a way to decompose a portfolio's performance in order to isolate the sources of return. In particular, is there a way to analyse the returns of a fixed income portfolio in order to show the manager is losing money from credit spread changes while making money from his duration positioning? There is – and it's called attribution analysis.

Performance attribution analysis is the exercise of decomposing a portfolio's performance to determine how the money manager has achieved the calculated returns for a given asset class (for example, bonds) or across asset classes.

Thanks to Gary Brinson and many others, people generally agree on how to calculate equity performance attribution and are comfortable with its interpretation. However, the common debate is whether classic equity attribution models can be adapted for the performance of fixed income portfolios?

That argument is in light of the very different investment processes followed by fixed income and equity teams.

Another area of concern is the performance spread between a bond portfolio and its benchmark, which is generally smaller than that of an equity portfolio and thus a higher level of precision is required for a fixed income attribution model.

But there will never be a "one size fits all" approach to fixed income performance attribution. Ideally, the factors on which a performance attribution model is based should be congruent with the investment process the portfolio manager professes to use.

Thus, instead of looking at performance in terms of externally imposed sectors, performance attribution models – based on the different investment processes – allow you to look at the returns generated by each type of investment decision made by the manager.

One example of such a customised fixed income performance attribution approach is the application of principle component analysis (PCA) on the returns of vanilla fixed coupon bonds and cash. PCA is a statistical technique that extracts the most common types of yield curve shifts over a period.

The three most common types of yield curve shifts are level shifts (that capture the duration view of the portfolio), slope changes and curvature changes.

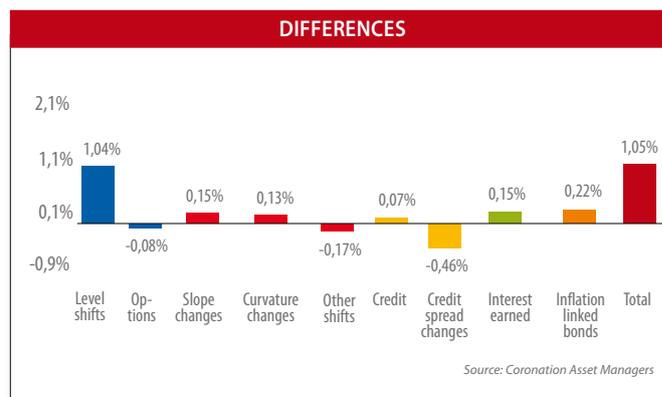
Subsequent calculations into the returns on the fixed coupon portion of the portfolio are broken down in returns due to coupon payments and pull-to-par, as well as the yield pick-up due to holding corporate bonds and credit spread changes. All other instruments are priced separately and don't contribute to

the factors resultant from the PCA. Their returns are then appended to the return breakdown.

The graph illustrates an example of such an attribution on an active bond fund. That's an attribution of the outperformance relative to the all-bond index, which was 1,05% over the period.

If we look at the graph we see the bulk of the outperformance came from level shifts in the yield curve. That comes mainly from the modified duration positioning of the fund relative to the benchmark. Modified duration is the measure of change in the portfolio value due to changes in the underlying interest rate.

We also see changes in the shape of the curve added another 11 basis points to outperformance, whereas the big negative impact came from credit spread changes.



An investor can look at that analysis to determine whether the portfolio's sources of return match the investment process the portfolio manager claims he's using or if they come from other sources not covered in the investment process.

If the former is true it increases the confidence the investor can have on the quality and potential replication of the alpha delivered by the manager. ■



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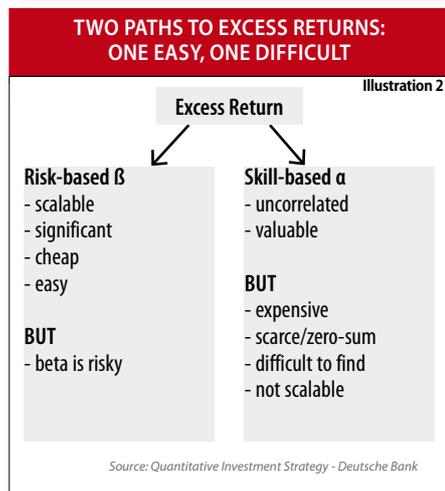
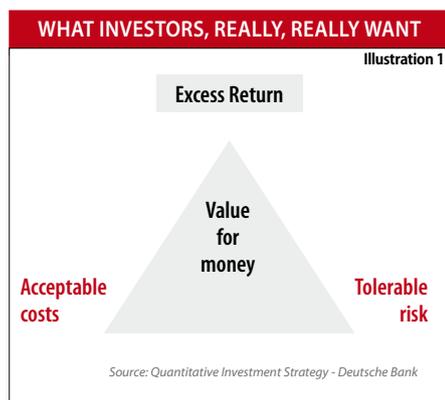
Dances with alpha

OUR INVESTMENT industry is currently characterised by an obsessive, compulsive mantra that generating alpha is the central purpose of investing. Producing alpha is certainly sensible and vital to your business if you're an asset manager or hedge fund manager but is it what the client really needs?

We have spent two years debating and soul-searching at CIO level with the largest pension funds, sovereign wealth funds, asset managers, hedge funds and consultants in Europe, Britain and Scandinavia. Our intensive efforts and research have concluded what long-term investors really, really want from their investments are three key components for investment success, being:

- An excess return (eg above inflation, liabilities, benchmark, etc).
- A positive return after costs.
- A return without "excessive risk". (See illustration 1).

Note that the word alpha or skill-based excess return doesn't feature in the above conclusion. We need to investigate each of those components further but we must appreciate that "value for the client" is represented by a triangle of needs, not just alpha.



an alpha return).

The second and often under-appreciated source of excess returns is excess risk. In fact, the very cornerstone of modern finance with its many derivatives (eg, CAPM, APT and new-age risk-factor models) all are based on the single belief that the majority of excess returns originate from those excess risks and not alpha. After all, the correct definition of alpha is: "The excess, residual return that remains after all returns from beta risk-premia have been accounted for." (See illustration 2).

Proper benchmarking

Only once we realise the majority of excess returns originate from excess risks and not alpha can we even attempt to use the word "benchmark". That's often poorly understood by active managers as well as investors. Alpha isn't the return above a benchmark – it's the residual return that remains after the returns from ALL excess risk-premia have been accounted for. As a consequence, to measure alpha we need to know what our betas are! In other words, every active manager needs to have a risk-factor model that he's managing against, whether he wants one or not.

A well-defined risk factor model defines explicitly which betas or risk-premia the fund is exposed to. Without such a model we can't even measure or define alpha. The problem comes in when we ask active alpha managers to explain their risk-factor model. If they don't have one, or don't understand what you're talking about, it's very difficult for them to justify or even claim alpha. Soon, if active fund managers don't in advance and explicitly define their risk factors, a risk-factor model will be imposed on them (see article in this supplement on "Returns-based style analysis").

Without a properly defined risk factor model, alpha could

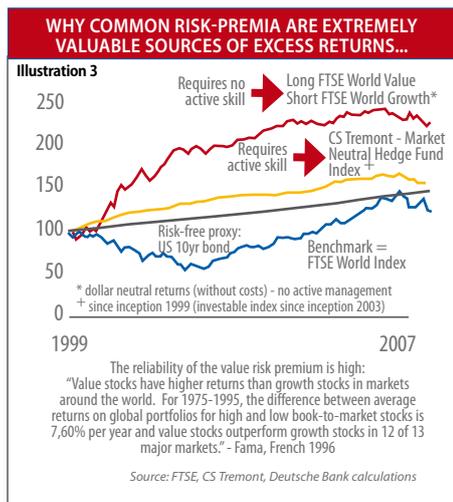
mean anything. It's sad but true that much excess return we term alpha is actually not "real" or "pure" alpha. Our concern is that the alpha industry is currently suffering from an identity crisis and that the term "alpha" is rapidly being lost in translation. Too many fickle interpretations of alpha have created a serious and awkward "translation fallacy" – where what we think alpha is, or what we want alpha to be, is moving away from an objective, scientific and consistent definition of alpha.

Beating benchmarks without skill

Given the above, is it possible to beat a common benchmark without skill? We'll now demonstrate two ways to achieve that. The first benchmark we'll use is a well-known type of strategic asset allocation or balanced fund approach, where the benchmark consists of the return calculated from a 60% weighting in equities, 30% in bonds and 10% in cash.

Much research has been conducted into the equity risk premium (ie, the excess return above the risk-free rate we obtain by taking on equity risk). If we assume the equity risk premium is around 5%/year then the easiest way to outperform our strategic allocation (60%/30%/10%) over the medium to long term is to go overweight equities, because the equity risk premium is higher than the bond risk premium (2% to 3% above cash returns).

So simply by taking on a static higher equity exposure (eg, 75% in equities) we can outperform. That's not a skill-based decision but merely an excess return by overweighting the riskier beta or asset class. The more risky portfolio naturally should provide us with an excess return over the medium to long term if basic financial theory is sound. That's clearly not an alpha return but a simple beta return. (See illustration 3).



international markets by nearly 8%/year (ie, the value risk premium).

That's again a risk argument, as value is fundamentally more risky and therefore requires a higher return than the overall market, otherwise nobody would be willing to invest in value stocks. That effect is depicted in the graph relative to a traditional FTSE world index equity-type benchmark. The same effect could be achieved by overweighting other risk premia (eg, small caps, emerging markets, behavioural risk premia, momentum, etc).

Benchmarking the absolute return enigma

We mentioned alpha isn't merely "the return above a benchmark" and that without a proper risk factor model we can't even define or measure alpha. We also showed it's very easy to deliver what might look like "alpha" without skill if the benchmark is merely a single factor, such as the overall equity risk premium represented by something like the S&P500, FTSE all-share or SWIX index.

We now need to investigate the murky world of "absolute return". Here there appears to be no need for a benchmark, as investors should be interested only in capital preservation rather than relative returns. That sounds very comforting and everyone would agree the idea of "capital preservation" is a noble and important

A second example would be to try and beat a common equity index, such as the S&P500, FTSE world index or the SWIX. Again, by taking on higher risk – by statistically overweighting small caps or value stocks – we can outperform without any skill. Fama and French (1996) showed value stocks reliably outperform growth stocks in 12

of 13 international markets by nearly 8%/year (ie, the value risk premium).

That's again a risk argument, as value is fundamentally more risky and therefore requires a higher return than the overall market, otherwise nobody would be willing to invest in value stocks. That effect is depicted in the graph relative to a traditional FTSE world index equity-type benchmark. The same effect could be achieved by overweighting other risk premia (eg, small caps, emerging markets, behavioural risk premia, momentum, etc).

Neither CPI+X% or cash returns are appropriate benchmarks. In fact, they can't be well-defined benchmarks as they don't reflect the risk-premia or betas the fund is exposed to. CPI+X% and cash returns are therefore, by definition, not benchmarks at all but merely return targets.

Using cash or CPI+X% as benchmarks we believe is deeply flawed. Beating cash returns or CPI can be easily achieved again over the long run – without any skill – by investing in cheap beta risk-premia (eg, bond-, equity-, emerging market-, small-cap-, value-, etc, risk-premia). In fact, the very definition of a "risk premium" is a sustainable return above the risk-free cash return.

In addition, using CPI or cash returns as benchmarks forces us to compare risky active portfolios to risk-less or near risk-less target returns. That's nonsensical, as risks primarily drive returns. It's like

only to the same return drivers that drive the S&P500 or the cited benchmark."

The second conceptual problem with absolute return is a perilous precedent emerging, where absolute return investors increasingly are claiming "alpha" within their absolute return mandate. For example, we've come across numerous funds listed in Britain and Europe with names like "Absolute Alpha Fund", "Currency Absolute Alpha", "UK Absolute Alpha Fund," etc. Those definitions are treacherous and demonstrate a poor understanding of both alpha and absolute return.

The main problem with an "absolute alpha" concept is that alpha, by definition, is a relative return concept, as the definition of alpha is an excess return above a benchmark, as represented by one or more betas. So if alpha is a relative return concept, how can it be sold as "absolute"? Any absolute return manager who therefore claims alpha has some explaining to do.

Schneeweis also wrote about that "absolute return" translation fallacy. He discusses the problem of inconsistent definitions of alpha in our industry. He makes the distinction between "marketing" definitions of alpha and relative performance alpha. He particularly takes a stance against risk-taking

One should never mistake a 'marketing' alpha from a relative performance alpha.

comparing a Ferrari (ie, a leveraged absolute return fund) to a donkey cart (ie, cash returns).

Thomas Schneeweis, Professor of Finance at the University of Massachusetts, warns about that in his 1999 paper. "It is not appropriate to say that you have a positive alpha (net risk-adjusted return) simply because the return is greater than the risk-free rate, unless your portfolio is risk-free. Similarly, comparing the return to the S&P500 or any other benchmark is inappropriate unless your strategy responds

alpha portfolios being compared to risk-less "cash return" benchmarks. "Managers must know which path they wish to take; that is, alpha as a marketing device or as a measure of comparable risk/return performance. If managers wish to define alpha to fit their own marketing purpose and use alpha to sell a product it's understandable. However, one should never mistake a 'marketing' alpha from a relative-performance alpha. If the manager can choose asset positions with a higher return (but the same ex-ante risk) to some

« comparable naïve investment position then that person can be said to achieve positive alpha.

“Managers may say that investors never care about relative return but only absolute return. But performance alpha is all about properly measured relative return. Unfortunately, we have no simple method for establishing this benchmark except under very restrictive situations. However, at least we do know that because any investment decision involves some risk the risk-less rate is probably not appropriate as a benchmark.”

We predict “absolute return” funds will increasingly come under scrutiny by regulators, as the definition is hollow and without meaning. For example, Standard & Poor’s sent a press release in July 2008 warning investors against seeking the “magic bullet” in absolute return funds. It said no two absolute return funds were the same and the risk of widespread “mis-buying” is high.

That was followed by the London *Daily Telegraph* (9 September 2008) announcing Britain’s Financial Services Authority’s intention to dig deeper into absolute return funds: It reported: “We want to better understand how the funds are developed and what consideration is given at the product development phase to risk management and treating customers fairly; to learn more about the marketing distribution of ARFs; and to assess the role of ARFs within the asset management industry as a whole.”

The noise around ARFs is set

to increase. In 2006, Waring and Siegel already warned us: “So the term ‘absolute return investing’ has no meaning. It misleads the listener into thinking it has substance that it doesn’t have and, in our opinion, the term simply should not be used.”

They went on to argue all returns are relative – relative to the risks we take. Therefore absolute return investors have, without being aware of it, some implicit “risk benchmark” in their strategy that they pretend doesn’t exist. “Of course, we wouldn’t disagree that a return pattern that beats the market in rising markets and that doesn’t lose money in falling markets would be a good thing – if it really existed ex-ante. And as you’ll see something like it can exist – but it’s not an absolute return.”

Conclusion: Alpha is being lost in translation

We’ve demonstrated that beating benchmarks is easy and doesn’t necessarily require any skill, merely excess risk, and therefore investors are incentivising managers incorrectly. Incentivisation will therefore move away from outperformance relative to common ALSI market-cap weighted indices (eg, SWIX), current CPI+X% or cash return hurdles to much more risk-adjusted and focused performance targets.

Only then the goal of the investor or client will be aligned with those of the managers. Only then will the triangle of needs we discussed in the beginning of this

note be within reach. Contrary to popular belief, both alpha and beta are important sources of excess return and therefore need to be deployed appropriately.

Neither fund managers – nor consultants, nor pension funds – are effectively separating alpha from beta in SA yet and that will increasingly isolate our industry in terms of proper benchmarking and product development from the rest of the world. We’ll also be stuck in chasing pseudo-alpha relative to the largely arbitrary benchmarks we currently are using.

For example, it’s perplexing that many large institutions use helpful professional risk-reporting tools such as Wilshire, Barra or APT

Both alpha and beta are important sources of excess return and therefore need to be deployed appropriately.

to define and measure the exposure of their portfolios to those off-the-shelf risk factors yet they don’t use those tools to measure the true alpha in the portfolio (ie, the residual return, once all those beta risk factor returns have been accounted for).

Increasingly, performance standards worldwide will have to define standardised ways or ethical guidelines to measure alpha properly and consistently. For example, the current standard for performance measurement called global investment performance standards



still doesn't state a standardised and generally acceptable way to define alpha.

It's our conclusion and prediction that the active investment industry will realise and accept in future that alpha might be necessary to generate excess returns but that it's very far from being sufficient. As a result, the role of managing much more scalable, cheaper and more sustainable sources of excess returns that originate from "smarter" excess risks (ie, betas) will

become a faster growth area for assets under management than alpha.

Gary Brinson showed us, way back in the Eighties with his famous series of studies, that, on average, active managers don't add value for investors. By deduction, only the most skilled managers are capable of adding value through alpha pursuits. But how do we identify those super-skilled managers? Well, the most important concept we need to get right is to properly measure and

identify skill with correct benchmarking.

This brief discussion paper has highlighted that, so far, we've been inappropriately and inefficiently defining and measuring alpha. Therefore, we need to correctly and urgently separate alpha from beta in SA before any value can be added to investors and before the active investment industry loses its credibility – because the true meaning and essence of alpha are rapidly being lost in translation. ■



Leon Campher
Coronation Fund Managers

***CAMPHER** probably made the biggest waves of his career when in 1993 he, with 19 others, left Syfrets Managed Assets to start Coronation Asset Management. Almost 25 years later, Campher takes over as the first CEO of an association that has the ambitious goal of unifying South Africa's savings, investment and life industries. Campher took his BEd at the University of Stellenbosch. He then gained extensive experience in investment management working at Old Mutual Asset Managers, Syfrets Managed Assets, Coronation and African Harvest. Campher also serves on a number of industry bodies and company boards.*

Relevance of savings and investment industry top priority for new association

THE NEW ASSOCIATION for Savings and Investment South Africa (Asisa) formally opened its doors at the beginning of October and represents the majority of South Africa's asset managers, collective investment scheme management companies, linked investment service providers, multi-managers and life insurance companies.

Formed earlier this year by members of the Association of Collective Investments, the Investment Management Association of SA, the Linked Investment Service Providers' Association and the Life Offices' Association those four associations have now been disbanded and staff members and assets have been transferred to Asisa.

Why a single association?

Asisa CEO Leon Campher says achieving a savings culture has never before been such a high priority in SA. "By uniting our industries we can now collectively apply ourselves to making a bigger difference by speaking with one voice. Asisa will be an active participant in creating an environment that promotes equal opportunities for its members through

holistic legislation while at the same time looking after the interests of consumers and ensuring the sustainability of the industries we represent and the intermediaries who promote us."

Campher says previously the four associations represented industries that shared one common goal: to provide consumers with savings and investment options. "As a united industry we're now able to promote healthy competition among companies by focusing on issues such as achieving meaningful disclosure rather than

was looking for to engage with on policy issues.

Asisa's structure

Membership can only be attained at corporate level, never at a subsidiary company level. In addition, their most senior representative can only represent members on Asisa's board. "The aim is to ensure high level strategic thinking shapes the future of the financial services industry and not product aligned agendas," says Campher.

That, he says, will enable Asisa to take decisions that will take into

Asisa will be an active participant in creating an environment that promotes equal opportunities for its members

pitching product wrappers against each other without providing the tools that enable consumers to pick the best option."

Campher says one of the first items on Asisa's agenda is to improve disclosure within the industry by making products more comparable in relation to costs versus benefits. He says Asisa also represents the single body Government

consideration the impact on an investor's entire basket of investments, irrespective of the investments that make up his portfolio.

Asisa's first step towards creating a level playing field in the financial services industry has been to introduce the principle where a full member can vote only once and not per unit trust or life licence held. ■