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collective insight

insight into SA investing from leading professionals

Is beta a betta investment?

How to assess passive investment strategies

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For e-mail, feedback and suggestions, please visit our website at www.collectiveinsight.co.za

Finweek publishes Collective Insight tri-annually on behalf of the South African investment community.

Is beta a 'betta' investment strategy?

Anne Cabot-Alletzhauser
Alexander Forbes

WELCOME TO the first *Collective Insight* issue of 2011. Our topic for this issue was "Is beta a 'betta' investment strategy? Now don't run away just because that word may seem like Greek to you. It actually is Greek, but the concept is one any investor will be familiar with – although they may not know what to call it. Beta, in its simplest form, is that part of performance an investor receives that can be explained by the market's or index's movement. By contrast, alpha – another concept (and another Greek word) that's often mentioned in the same breath – is that part of performance that can be explained by the value added by an active manager above and beyond the market's contribution.

Traditionally, investors could capture beta performance by simply investing in such passive strategies as index funds or index futures or ETF's, such as Satrix. The advantage is the cost should theoretically be substantially lower than investors would have to pay active portfolio managers or unit trusts. As such, a number of proponents of the "Cost matters hypothesis" – investors who argued that simply controlling the cost of your investment over a long term might actually add more value than chasing active outperformance – say beta is most decidedly a better long-term strategy than trying to chase returns.

However, over time, beta has evolved beyond those broad market betas to encompass style betas, strategy betas, dynamic betas, etc, as investors seek to replicate active investment strategies at lower costs through such so-called "smart betas". Effectively, those are passively managed strategies that try to replicate the essence of active manager performance.

What has basically emerged is a wide variety of "instruments" that are available to even the casual investor and yet have wide-ranging implications to help manage both risk and return sides of the equation for investors.

In this issue we publish a number of excellent articles from local and overseas contributors that examine beta's contribution to long-term performance, the evolution of indices, how it can be effectively combined with an active asset management strategy and how to put it all together in a risk budgeting/risk management exercise.

Nerina Visser, of Nedbank Capital, starts us off with a pithy piece entitled "Understanding the tools of the trade" that sets us straight by defining beta and busting a number of myths about the topic. Next we have a seminal piece – originally written by the team at Research Affiliates in the United States and then edited for our audience by Paul Stewart, of the Plexus Group – that sets out the whole debate about market cap weighted indices (like the JSE All Share) and helps us understand their embedded limitations.

Our third article – "Good, beta, but not the best" by Helena Conradie and Robert MacDonald – introduces smart beta or specially built indices or bespoke indices that use company-related factors to outperform traditional indices that weight their constituents by market cap. It also touches on how the smart beta portfolios can be used in a core/satellite approach.

Roland Rousseau then argues that without "smarter indices" we simply can't manage risk properly – much less assess manager skill. Rousseau also introduces us to passive index strategies that capture active investment strategies and helps us understand their potential role in portfolio management.

From the team at MSCI/BARRA in the US we have an article called "Some like it hot". It effectively provides us with a fresh perspective on how to create core satellite (active/passive combination) structures that reflect the latest cutting edge thinking in this sector.

Which naturally brings us to our last article: "How fund managers manage their own money" by Carl Isernhinke, of the Clade Group. This article may strike the reader as being a sharp departure from the topic. It starts by describing the fact that if you really believe in

your ability to pick good shares you should ideally hold a very concentrated portfolio of just a handful of shares. But the reality of our regulatory environment (and rightly so) is that managers operating as fiduciaries for pension fund assets and individual investors' precious savings, those "stock pick" portfolios are simply not viable from a risk management perspective. Isernhinke ends by restating an important theme for this issue: ironically, if investors are really intent on capitalising on manager stock-picking skills, an optimal strategy is one that integrates the low-cost benefits of index funds (or even smart index funds, if you prefer) with targeted, concentrated stock selection portfolios.

Enjoy the read: it's worth the effort to get past the "Greeks". ■

IN THE NEXT ISSUE…

THE TOPIC for our next issue of *Collective Insight* is: "Go global or go home." Currently, there seems to be some frenetic debate as to what really are the merits/demerits or just general considerations of global investing for South African-based investors.

Retail investors feel particularly bitter about the last rush to get assets deployed offshore at the absolutely bottom of the rand's valuation in 2001. So we wanted to use this upcoming issue to revisit the debate. This is a particularly tricky one, as we don't want to be discussing the timing of the decision but rather the principle.

Authors could consider perspectives such as:

- If global is right, what asset classes/market segments are meaningful to South African investors?
- To hedge or not to hedge the currency?
- How do we deal with the liability side of the equation?
- Diversification? What diversification? Didn't all markets crash in 2008?
- Are active strategies viable in these overcrowded markets and, if so, how do you know which to pick?

Please remember this is a research publication and, as such, please no marketing material or market commentary. All entries are due by 3 June 2011. Please contact Advisory Committee Convenor Anne Cabot-Alletzhauser at 083-441-2421 with your topic so we can minimise duplication. Articles (approximately 1 200 words, plus illustrations) need to be submitted to cabota@aforbes.co.za. ■

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Understanding the tools of the trade

THE HEAD CHEF carefully lays out the tools of his trade – his prized knife set. There's the carving knife to slice the thin slithers of carpaccio of beef for the starter. His personal favourite, his paring knife, allows him to do all the delicate work, such as de-veining shrimps and removing seeds from chillies. Tonight he'll also be using his fillet knife to de-bone the fish. And finally the palette knife, the frosting spatula that will smooth the rich icing over each individual dessert.

To the uninitiated, it's hard to see the fine nuances of the differences between all the knives in a professional chef's set. And although you can certainly frost a cake using a carving knife or peel a potato with a paring knife it's not the most efficient way to get those jobs done. This analogy translates well into the world of investment management, where different "tools" are used to make decisions and invest money efficiently and optimally. One of the best sets of tools available is often grouped under the generic term of "beta". But to generalise, beta as a single strategy is much the same as dismissing all culinary cutting appliances merely as a knife.

Let's evaluate some of the widely-held beliefs about beta and clarify some of the myths:

The term beta (β) is often used interchangeably with "the market".

In finance, the beta of a stock or portfolio is a number describing the relation of its returns with that of the market as a whole. An investment has a beta of zero if its returns change independently of the market's returns. A positive beta means the returns of the investment generally follow the market, in the sense they both tend to go up or down together. A negative beta means the returns of the investment generally move opposite to the market.

Therefore, a beta investment

strategy relates to an investment in the market overall – or at least the extent to which an investment is exposed to the overall market. In its simplest form: if you invest 50% of your money in a broad market index fund (eg, Satrix 40) and keep the rest in cash, your portfolio has a beta of 0,5. Similarly, an investment of 70% in Satrix 40 and the rest in cash will result in a portfolio beta of 0,7. That's because Satrix 40 broadly represents the overall market, which means it will have a beta of 1.

Choosing a beta exposure is highly individual. If an investment manager is benchmarked to some sort of market index, that manager would probably opt to have a high level of beta exposure. If the manager was aiming for an absolute return, he or she would probably opt to have a rather low beta exposure.

However, that's a very one-dimensional view of beta. It assumes investment portfolios are only exposed to one risk factor: namely, the overall market. Mathematical models, such as the arbitrage pricing theory (APT), have expanded on that concept using multiple betas in its model to acknowledge asset performance is driven by multiple risk factors.

Each risk factor has a corresponding beta indicating the responsiveness of the asset being priced to that risk factor. In this expanded framework beta becomes a term relating to risk exposure rather than just the broad market. And just as an ETF such as Satrix 40 is a tool with which you can access the beta called market risk, there are other ETF tools available that allow the investor to selectively add targeted or required risk exposures to his portfolio.

Beta is a low-risk strategy

Why I boldly state this is a myth: In its simplest form, risk should refer to the danger, or chance, an investor can lose his money. In finance terms, that's often expressed as a probability and mathematically calculated as the volatility, or standard deviation of the historical returns of the asset.

The other interpretation of "risk" is in the context of tracking error, which relates to the extent to which an investment manager deviates from a particular benchmark in terms of sector- and security-specific weights. A portfolio with a high tracking error has a high risk of producing a performance different from that of the benchmark. A low-tracking error portfolio will have a low risk of performance different to the benchmark.

When the term beta is used in the context of a market index tracking strategy, the term "low risk" refers only to the risk of underperforming the benchmark, NOT the risk of losing money. That latter riskiness of the investment will still be entirely dependent on the volatility of underlying assets in the benchmark. By implication, not all "beta" investments are therefore low-risk investment strategies. Another common misconception about beta is when it's defined as asset volatility relative to market volatility. In an extreme example, something may have a beta of zero even though it's highly volatile, provided it's uncorrelated with the market. This doesn't make for a low-risk investment either.

A beta strategy is a passive strategy

A beta strategy is only passive in the sense no active decisions are required relating to economic or other fundamental issues such as stock selection.

However, the decision about beta investments can and should be made actively and consciously. The correct choice of asset class, appropriate benchmark, required risk exposures and the combined effect of the diversified beta investments should be the result of prudent planning and should be revisited regularly as investor requirements and liability profiles change. It's only the construction of the beta components that are passive, not their application.

The "versus" debate – active versus passive, alpha versus beta, etc

Mathematically, alpha is a concept that can only exist in the context of beta, as alpha measures the performance of an investment in excess of beta. Beta in this context may be defined as the performance of the broad market, the benchmark or even a comparative peer group. Alpha is then best defined as the risk-adjusted performance of the investment relative to that of the specified beta. It's therefore pointless to debate the merits of the one relative to the other, as they're concepts that have to co-exist and, just like co-joined twins, are wholly dependent on one another.

To proponents of a supposed

One of the best set of tools available is often grouped under the generic term of "beta"

"pure beta" strategy I argue your first active investment decision is your choice of beta: Which market will I invest in? Which benchmark will I use? Which peer group will I be compared to? In fact, the last two questions are often beyond the control of the investment professional, as those are usually determined by the investment mandate set by the trustees, asset consultants, multi managers, etc.

An active strategy stands independent of beta

Many active managers dismiss the role beta plays in the overall performance of their investment portfolios. They're reluctant to engage in discussions about beta, as they clumsily lump all aspects of beta strategies under the guise of "index tracking" – that is, strategies only used by the lazy and the uninformed. The fact of the matter is ALL investments contain a component of beta (as in broad market performance and other risk factors) in them, regardless of how loudly the pure alpha managers proclaim the opposite.

The sooner you can acknowledge the presence and influence of beta in your investment portfolio, the quicker you can isolate it and include or exclude it as and when you desire. Beta building blocks such as ETFs allow the professional investor to target the specific exposures he wants in his portfolio and to access them cheaply, efficiently and with minimal influence from other risk factors.

Beta has many and varied uses in investment strategies – much like the different uses for knives. Although you could spread the icing on a cake using a carving knife that wouldn't give you the best result. A chef worth his salt would always choose the best knife for the job at hand. Similarly, when the appropriate beta instrument is applied to the investment process at the right time that does result in a "betta" investment strategy.

Let's be honest: beta isn't the Holy Grail. However, it should never be dismissed summarily – either as just a cheap entry into the broad market for the uninformed retail investor or a strategy out of step with the supposed superior techniques employed by investment professionals. In fact, it's a powerful instrument in the toolkit of ANY investor: it's the specialised implement in the hand of the cordon bleu chef, preparing each gourmet investment meal for the discerning investor. Only the barbaric among us will attempt to eat a nouvelle cuisine meal with only a fork or, worse still, by hand. It is, after all, the 21st Century. ■

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Beyond cap weight*

FOR MORE THAN 40 years our industry has relied on the capital asset pricing model (CAPM) beta and the capitalisation-weighted market portfolio, for market representation and for our default core equity investments.

In other words, its weighting in the index is a function of the number of shares freely available times their current price. This elegant world view is now under siege from various directions. The "fundamentalists" advocate a portfolio that weights companies in accordance with the recent economic scale of their businesses. The "minimum variance" crowd point to the value of consistency between investor objectives and portfolio construction. The "egalitarians" advocate equal weighting.

Historically, those alternative index strategies have delivered higher return and lower CAPM beta, which can help an investor to target either more return or less risk, or a bit of both. Each of these strategies – along with the ever-dominant cap-weighted indexes – has strengths and weaknesses, some minor and some major.

Perhaps it's time to consider a bigger tent, allowing for the merits of multiple broad-market indexes and multiple betas? We explore the surprising efficacy of combining multiple strategies into a diversified beta portfolio.

Introduction

Historical concepts regarding market efficiency and single factor beta are losing favour. Just as many investors are increasing exposure to passive strategies they also face a new and unsettling prospect of "benchmark regret" – to borrow from the terminology of behavioural finance – as it's no longer clear market cap-weighting is the only legitimate benchmark or core portfolio choice. In fact, institutional investors can choose from a wide array of alternative beta strategies, including equal weight, minimum variance and economic size or fundamental index approach. Those alternatives have generally offered better returns or lower volatility, or both, when compared to cap weight, both in historical tests and on live assets, albeit over a shorter span and on a smaller asset base.

In the rapidly changing world of indexing, any investment decision is an active choice: even a switch from active into passive exposure. The decision to invest passively provides only a starting point for determining which passive or quasi-passive approach

best meets an investor's needs. Some call these new ideas beta-prime, some call them enhanced indexing, still others dismiss such approaches as active management in sheep's clothing. Whatever we call them, few would deny they're fast changing the investing landscape.

Index alternatives

Of the alternatives, we've chosen to explore – and combine – the four approaches garnering the most attention as alternative core equity strategies. As we delve into their characteristics let's also examine the principles and tacit core assumptions that lay a foundation for each.

Cap weight

Market capitalisation remains immensely popular as the incumbent and theoretically efficient choice, despite doubts about whether its core theoretical underpinnings – the efficient market hypothesis (EMH) and CAPM – are precisely correct. Cap weight tacitly assumes share price-implied consensus expectations regarding the net present value of each company's future growth prospects are an unbiased view of the future. Furthermore, cap weight offers very low turnover, trading costs and tax consequences the newer alternatives can't quite match.

As EMH and CAPM gained traction in academia, the theoretical result – that a single portfolio could be optimal – was revolutionary. The theoretical purity of cap weight, along with the difficulties faced by the average active manager, in time gave rise to passive investing. The growth in "index funds" was fuelled by the historical fact the average active manager has had a hard time beating cap-weighted indexes after taking account of fees and transaction costs.

No student of the capital markets should find that the least bit surprising. After all, if we divide the market into the passive, cap-weighted indexes and the combined holdings of all active, non-cap-weighted portfolios – including individual investors – the former matches the market in both holdings and performance, which means the latter must also match the market before costs. So net of costs, the non-cap-weighted active managers must collectively lag cap weight.

If EMH and CAPM are mere approximations of the real world then the assured dominance of cap weight on a risk-adjusted basis evaporates. When investors construct portfolios that weight companies' proportional to capitalisation they inherently overweight the overpriced stocks and underweight the underpriced stocks.

Economic scale (or fundamental index)

The economic scale approach uses a company's fundamental economic size – weighting companies according to sales, cash flow, book value and dividends – then averaging the four measures, both to select the 1 000 largest companies and then to assign portfolio weights to each company in an index. The "fundamentalists" point out that if the market is inefficient and prices may stray above or below a company's future true fair value the cap weight of every overvalued company will be above its fair value, weight and the cap weight of every undervalued company will be below its fair value weight.

If we weight companies by their fundamental economic size we enjoy many of the attractive attributes of the cap weight portfolio, such as liquidity, low turnover, scalability and objectivity. Selecting and weighting companies for a stock market index using fundamental economic measures of company size was introduced by Arnott, Hsu and Moore in 2005.

The "fundamentalists" argue that economic scale serves as an anchor for contra-trading against the constantly shifting expectations of the market and this

contra-trading is the primary profit mechanism of economic scale portfolios. Some even suggest economic scale strategies don't earn an alpha at all; rather, they suggest that cap weight incurs a negative alpha against its opportunity set that economic scale partly corrects.

The economic scale portfolios don't have a monopoly on that advantage: The same holds true for any index method that provides a steady anchor for contra-trading against the market's most extreme bets. That same argument may be made for any weighting scheme that doesn't take share price into account when setting portfolio weights. Which brings us to the other two index structures we wish to explore in this paper.

Equal weight

The equal weight approach assigns an equal weight to each company in an index, thereby tacitly assigning zero information value to all public and private information about a company that might be included in the price. For example, the S&P 500 equal weight index tacitly assigns value to a stock's inclusion or exclusion from the index but no value to any differentiating information, which might lead us to prefer any one company over any other. Equal weighting was the basis for the first index futures. As such it provides an interesting counterpoint to cap weight.

Suppose we assume it's impossible for any investor to predict a security's risk or return, or how it moves relative to other shares. It then follows that holding an equal amount of each investable security results in the portfolio with the lowest predicted risk – at no sacrifice to our expected return. Put another way, if the cap weight portfolio reflects the view the aggregate investor universe fully incorporates risk and return forecasts, then equal weight assumes the aggregate investor universe has zero ability to forecast anything.

For practitioners, the elegant simplicity of an equally weighted portfolio is compromised by implementation issues. Because equal weight means we hold small illiquid companies on the same scale as large ones, the strategy results in higher transaction costs and lower capacity than cap weight. Still, absent trading costs and any view on forecasting return or risk, equal weighting has considerable appeal on a risk-return basis.

Minimum variance

Minimum variance portfolios are designed to reduce portfolio risk. In an efficient market that shouldn't improve our risk-adjusted returns. But if equity returns aren't linearly related to beta – as CAPM predicts – it may generate high risk-adjusted returns. That approach, introduced in the early Nineties, has been gaining traction recently. It builds portfolios without reference to a benchmark by using historical measures of risk with the goal of minimising the portfolio volatility. Its efficacy depends on the market mispricing risk.

In a world increasingly focused on risk, it's unsurprising that the concept is gaining attention. Investors have traditionally created equity portfolios that manage risk relative to market indices; less attention has been paid to the question of which index best meets investors' needs. Minimum variance portfolios are constructed to create high risk-adjusted returns by minimising volatility without reference to return expectations. Haugen and Baker (1991) were pioneers in that domain; their United States-focused research principally concluded that due to investor restrictions on short selling, tax situations and risk and return expectations, portfolios could be constructed that dominated the market portfolio in terms of risk-adjusted returns.

Falkenstein (2009) suggested a utility function that measures risk within the context of relative wealth and that this is an outcome of investor preference for status. This perspective is consistent with the institutional investor focus on information ratio as the preferred measure of risk-adjusted returns. Evidence that risk preferences vary among individual investors is provided by Dorn and Huberman (2009), who examined a large number of broker accounts and found that holdings tended to cluster by volatility. Portfolio risk considerations are secondary to return expectations and the comfort of stocks that are within preferred risk habitats. A related opportunity has been identified to invest in stocks with low volatility. That portion of the universe has been found to have greater-than-market returns, while stocks with high volatility empirically tend to deliver lower returns.

Combining the indexes

These methods provide discrete choices to the investor, with very different and surprisingly complementary characteristics. It's by no means an exhaustive list. For example, two organisations in France – TOBAM and EDHEC – have developed very interesting "maximum diversification" and "efficient index" portfolios. The TOBAM team, formerly members

Perhaps it's time to consider a bigger tent?

of the Lehman Brothers quantitative research group, constructs a "maximum diversification" portfolio that has an equal and lowest-possible correlation with its constituent holdings, and for which all excluded assets would boost the correlations, if included. The EDHEC "efficient index" portfolio is based on presuming return is linearly linked to a general measure of total risk (semi-deviation) and then using Markowitz mean-variance optimisation to identify the tangency portfolio. Both ideas are fascinating variants of the broad concept of minimum variance.

We think the four strategies we include in our research are the most widely accepted passive and quasi-passive alternatives. They can be combined to create a compelling investment – and a "diversified beta" – that incorporates many of the historical advantages of passive portfolios while perhaps earning higher returns or experiencing less risk.

Each strategy has its own strengths and weaknesses. Cap weight tautologically has the lowest tracking error and should maximise risk-adjusted return – if EMH and CAPM hold fully and perfectly true. Minimum variance achieves its objective with the lowest volatility and highest Sharpe ratio. The economic scale portfolio, measured relative to the cap weight portfolio, has the highest information ratio and ties with its own equal-weight variant for best statistical significance for alpha. Equal-weighting the cap weight portfolio offered the lowest tracking error of the non-cap-weighted strategies but also delivered the highest volatility.

Weighing companies by their fundamental economic size

The combinations are surprisingly robust. When investors are uneasy about a singular reliance on cap weight for their core holdings – and therefore choose either beta combination strategy – both beta combinations result in higher performance and lower volatility when compared with an exclusive use of the cap weight strategy.

The main conclusion we draw from these results is that all five alternatives to the cap weight portfolio, as well as both combined strategies, have historically dominated cap weight in returns and/or risk-adjusted returns. A classical return attribution would suggest this is at least partly due to the size and value tilts inherent in those various strategies. Alternatively, as we've suggested in other papers, that advantage is perhaps because the non-cap and combined strategies all contra-trade against the market's constantly changing expectations, as reflected in a company's share price and market cap.

Consistent with the strategy's design, the lower risk of the minimum variance portfolio – as is clearly evident in the more stable return stream. When compared to a market capitalisation index the returns are weaker in extreme market rallies and more resilient in bear markets. It's a nicer ride – to very nearly the best end-point wealth! – with stable returns for investors concerned about total volatility. However, we should readily acknowledge the tech bubble of 1999/2000 would have tried the patience of any adherent to the non-cap-weighted alternatives!

For the conservative investor who doesn't like putting all eggs into the same "beta basket" a good alternative may be to diversify among different beta strategies. The efficient beta portfolio and all-four-combined portfolio preserve some of the good characteristics of the economic weighting and minimum variance approaches. The cumulative performance of the two combined strategies are remarkable in that they are near-identical in returns, risk and other characteristics.

All portfolios have excess kurtosis and negative skewness, which are well-known characteristics of most equity investing strategies. Drawdown characteristics are similar, with minimum variance showing the smallest drawdowns and global equal weight showing the largest. Reciprocally, minimum variance sharply reduces the largest gains in strong months and quarters, though that weakness disappears over 12-month spans. The minimum variance portfolio also has the highest negative skewness. Of course, that asymmetric characteristic in the minimum variance return distribution – more extreme losers than winners – is mitigated by the significantly lower volatility of that strategy.

The combined efficient beta portfolio's outlier characteristics are more similar to those of the cap weight portfolio than any of the individual non-cap strategies, which may serve to reassure the risk-averse investor: moving from a singular reliance on cap weighting to a more diversified approach doesn't subject our portfolio to any significant increase in the downside risk. In each time span efficient beta's greatest win is larger than for cap weight, while its greatest loss is smaller.

Conclusion

You can make a very good case these strategies don't offer alpha but offer "better beta". After all, none of those portfolios use "stock selection" in any classical sense of the term. There are no interviews with management, no forecasts of future business

prospects and no careful parsing of financial statements. In one case we ask: "How big is the company's current book of business?" This defines both the selection and weight for the economic scale portfolio. In another we ask: "Can we create a portfolio designed to achieve high risk-adjusted returns without the use of return expectations?" This defines the minimum variance portfolio. In yet another we ask: "Why should we favour any stock over any other?" This leads to global equal weight, for which the only active decision – a non-trivial decision! – is to select the universe we will equal-weight.

Our research shows a combination of cap weight, economic scale and minimum variance creates a compelling risk/return profile. Perhaps it's time to revisit our automatic reliance on cap weight as the sole strategy for measuring stock market success or as the default choice for our core equity holdings.

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Good, beta, but not the best

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WITH BETA investment strategies getting smarter, investors and/or consultants can now put together a portfolio that allows different players in the value chain to do what they do best. Whereas the traditional core/satellite manager approach combined a completely passive core with active satellite investment managers, a new generation core/satellite model enables investors and consultants to combine a core portfolio of passive and smarter beta investments with unshackled, specialist investment managers.

The new model is premised on the understanding that traditional alpha can be divided into non-market-related returns – known as pure alpha – that are truly a result of a fund manager's active management skills and a portion – defined as smart beta – that can be systematically captured by advanced investment models and the insights of experienced investment professionals.

The green line in the graph below represents the performance of a typical value fund. Such performance is usually viewed relative to "the market" or benchmark – represented here by the FTSE/JSE SWIX index (the blue line on the graph). This value fund manager has comfortably outperformed the market, as is to be expected in a strong value cycle. That excess-of-benchmark performance, traditional alpha, can be attributed to a combination of activities: greater exposure to value and small cap stocks as well as suc-

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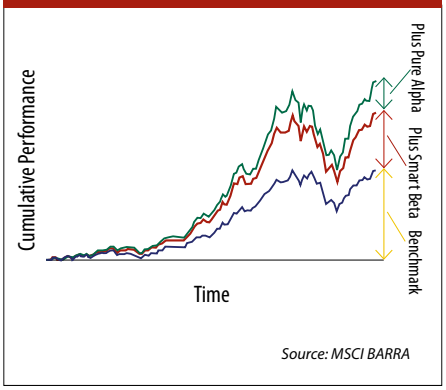
cessful stock-picking on the part of the fund manager.

Surely the systematic overexposure to value and small cap stocks, for example, and the associated portion of this fund's outperformance (the red line on the graph) can be captured through the recent smart developments in the index world. It's that return smart beta products aim to capture. This substantial portion of traditional alpha can be replicated by building systematic exposure to particular themes or styles in the market (in this case, a systematic value component). The pure alpha portion (the difference between the green line and the red line) remains the exclusive domain of the active manager. That's exactly where passive meets active and where the concept of smart beta has been successfully introduced.

In building a holistic smarter active/passive portfolio, fund managers responsible for managing a smarter core are tasked with capturing alpha by implementing smarter beta investment strategies, which include non-market cap-weighted and style-based portfolios; while active managers (the satellite fund providers) are given the freedom to bring their skills to bear by focusing on delivering uncorrelated alpha.

Achieving alpha is invariably a hit and miss affair

BUILDING A SMART CORE BY EXTRACTING SMART BETA FROM MARKET



Source: MSCI BARRA

In that way investors get access to a well-diversified portfolio geared to maximise all types of alpha, distribute risk more effectively through the entire portfolio and be more cost-effective than investing solely with an active fund manager.

Consultants and advisers potentially have a valuable role to play in identifying managers best suited to fulfilling the different roles in a "core/satellite version two" portfolio and then constructing robust and effective portfolios. In structuring portfolios that way the consultant is able to source alpha from different investment propositions and rely less on having to choose the best alpha providers – a tough task and difficult to get consistently right. Achieving alpha in benchmark-cognisant funds is a zero-sum game – and thus it's invariably a hit and miss affair identifying the top alpha providers.

When it comes to the smart beta portion of the core portfolio, investors are increasingly looking at investing in style-based portfolios. Fund managers are meeting that demand with a range of style building blocks. These systematically capture the returns delivered by different investment styles, which can be extracted by investing based on certain identifiable factors. For example, a momentum style is best expressed in price momentum and earnings momentum, while value investments can be established by financial measures, such as price-to-book and price-to-earnings multiples.

These styles can also be combined into a blended portfolio that diversifies and cushions investors from periods of underperformance in one of the styles. For example, while value investing has been the best performing style over time, when it does underperform it can do so for some time. So combining value and momentum style portfolios into a single fund offers an investor less volatile and more diversified investment exposure.

Investing in style building blocks within the smarter core segment of the core/satellite model also offers investors the benefit of great transparency through pure, true to label exposure to that style – and at a much lower cost than active investment products. Once again, the consultant and/or adviser can play an important role in tactical style timing, particularly with momentum style investing tending to outperform over shorter term timeframes.

Once the smarter core portfolio has been set up it's possible to give active satellite fund managers an aggressive mandate not tied to any benchmark and represents their best investment views. This approach also substantially reduces manager risk.

Perhaps the most compelling argument in favour of a "core/satellite version II" investment approach is the reduction in costs, because that's the first step in creating alpha. Investors usually start off on a minus when they pick an actively managed fund due to the fees involved. So the fund manager has to first build up returns that cover the fees before actually beginning to generate alpha.

That's less of an issue with beta funds. So by handing out smaller, more aggressive mandates to active managers they have a better chance of outperforming the financial markets and the fees incurred by the investor. Meanwhile, the smarter beta portfolios are extracting the systematic alpha traditionally generated by benchmark-cognisant active manager investment portfolios and doing so at lower cost.

Is SMARTER beta a betta investment strategy? Time will tell, but certainly the notions of active and passive have been redefined to give investors a far better bang for their buck! ■

Using "smart betas"

ROLAND ROUSSEAU
A-Dex

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WITHOUT SMARTER indices, we can't manage risk. In order to implement prudent risk management we need new tools that were, until a few years ago, unavailable. The only risk we can hedge or identify or trade currently is general market risk, as represented by something like the Top 40, ALSI or SWIX. Not only are there cost-effective derivatives listed on those instruments but we can also short out the impact of the market with an index or an ETF, thereby reducing overall volatility partially (net-long) or fully (market-neutral), something you can't achieve cost-effectively and dynamically without indices.

Probably the most exciting aspect of hedge funds is that they're able to control volatility through shorting or hedging, thereby reducing total risk. That much we can salvage from those types of long-short investment strategies. However, hedge funds aren't incentivised to reduce risk but rather to maximise return relative to cash or CPI returns, which can cause them to use excessive leverage and gearing. Performance-based fees are unfortunately never based on a risk-adjusted return, only on raw returns.

Hedge funds also often short individual stock portfolios instead of indices, which often cause them to hold illiquid short positions that are tough to change if market conditions suddenly change. Short positions have infinite loss potential and have been the root cause of many hedge funds ending up in a short squeeze and blowing up during a liquidity crisis (eg, LTCM, Amaranth, etc).

Hedge funds also often reinvest the cash proceeds from their short positions into the market, basically increasing gross market exposure rather than reducing it. Give a hedge fund R100 and it will turn it into R200 market exposure by using your capital as collateral to borrow funds against. Most hedge fund investors don't even know that. Their risk tolerance is therefore very different to yours.

The point we're trying to make is twofold: first, hedge funds aren't risk-averse investments even if they're market neutral. Second,

Probably the most exciting aspect of hedge funds is that they're able to control volatility through shorting or hedging – thereby reducing total risk

you don't need expensive hedge funds to reduce or hedge out the market risk. Investors like fund-of-funds and pension funds could easily, for example, invest with a long-only fund manager and pay long-only fees and then sell or short a market index or ETF themselves. If you sell R100 worth of an index or ETF and invest the same R100 you receive from your short position with a long-only manager you have a DIY hedge fund. There are also no performance-based fees relative to CPI or a cash return involved. Not in all, but certainly in the majority of cases, hedge funds are nothing other than long-only managers combined with a short position on the market.

Managing your own risk this way by shorting indices makes a lot of sense, because you can adjust your market exposure by selling or buying back an ETF or the market index, depending on your current risk tolerance. Remember: your risk tolerance is often much lower than that of a hedge fund manager. Fund-of-funds, private banks and pension funds in Europe are already experimenting with managing and branding their own risk-controlled strategies without any external hedge funds or absolute return managers.

Another way to reduce risk is to allocate a portion of your investment to cash. That's probably the oldest and cheapest way to reduce risk in your portfolio: 50% passively invested in a common market index such as the Top 40 and 50% invested in cash also can outperform CPI+2% in many cases and requires zero active management.

Active beta or active risk management is therefore something fund-of-funds best do themselves, because only they will know, at aggregate fund level, what their client's current risk tolerance is. Hedge funds and absolute return strategies are often much more reluctant to lower risk than you are when it matters most, as lower risk immediately translates into lower raw returns and consequently less performance fees for the hedge fund managers.

In a nutshell, indices and ETFs are becoming vital new instruments to manage risk proactively and cheaply. In the same way you brush your own teeth and choose food off a menu yourself, we should be choosing and managing risk ourselves. Fund-of-funds are ideally suited to create, brand and charge for tailor-made risk management using cost-effective but smart index strategies.

Most fund-of-funds in SA have a generic range of solutions and each client is stuck in those silos. However, clients and end-investors are demanding more tailor-made and adaptable solutions for their specific needs. Adaptable risk-focused solutions are only possible with index funds. Tactical and bespoke risk management is therefore an exciting and valuable area for fund-of-funds to differentiate themselves in.

Index funds that outperform

Currently, most investment professionals assume all index funds can do is track the market for very low costs. In other words, they provide no performance benefit. Ironically, despite the majority of active funds underperforming after costs active management still can provide us with the hope of outperformance, because there will always be an active manager at the top of the league tables with strong performance (sadly not the same one). Hope plays an important role in the confusing world of investing and is a key reason for the continued interest in active management. All indexation provides is certainty of being average with no hope of being better off.

Well, that perception is rapidly changing. Much thinking and some impressive global and local research into indexation strategies over the past 10 years have delivered some powerful new concepts. A new dawn in indexation is upon us, because there are now indices that actually can – quite reliably – outperform over the medium to long term, traditional equity benchmark indices, such as the S&P500 or SWIX, without the need for conventional "kick the tyres" fundamental active management. By nature, market cap-weighted indices are structurally overweight large cap stocks more than small caps.

According to Robert Arnott, there are smarter ways to redesign indices that can provide excess return to market cap-weighted indices, using a concept known as "fundamental indexation".

Indices weighted on fundamentals rather than on price are more broadly known as "price indifferent" indices. Such indices weight stocks not on price or market value but on, for example, how much earnings, dividends and sales the companies produce. These fundamental components are often equally weighted to obtain an overall weight for each stock. By avoiding price completely in the index design, Arnott argues, you avoid buying or holding too much large cap stocks that are over-weighted purely because of price momentum that got them to the size they are.

Swinkels and Blitz (2008) explain: "Crucially, the proponents of fundamental indexation claim capitalisation weighting by itself introduces a drag on performance, because in a market capitalisation-weighted index overvalued stocks tend to be overrepresented, and undervalued stocks tend to be underrepresented."

However, according to our own research, a key problem with price-indifferent indices is they fail to value companies efficiently. In other words, by ignoring price we're eliminating probably the key variable that measures if a stock is intrinsically "cheap" or "expensive" relative to "fair value".

Active managers are, for good reason, very sensitive to the level of a share's price relative to

fundamental variables like earnings and dividends.

This brings us to a new type of index. We call them "Active indices". They're strictly transparent, rules-based indices that explicitly try to value – in a robotic, mechanised fashion – if a stock is expensive or cheap. Cheaper stocks get a higher weight and expensive stocks get a lower weight. Price indifferent indices are clearly not capable of valuing a stock as effectively as indices that are price-sensitive, because price indifferent indices purposefully snub the price information – which is the most important variable in valuation.

It's easy to demonstrate a low price-to-book or a low price-to-earnings portfolio has a significant chance (eg, 70% over 18 months) of outperforming a market cap-weighted index such as the ALSI or SWIX. It's therefore possible to mechanically build indices with stocks that exhibit high dividend yields or low earnings multiples without requiring an active stock-picker.

In the past, the only way to get exposure to traditional value style investing – in the same way that Warren Buffett and Ben Graham invested – was to find a good active value manager. Now you can buy a smart value index that will capture most but not all of the value risk-premium effect in the market.

Sure, some active fund managers will pride themselves on their research skills and adjust headline earnings in interesting ways and visit the corporate management of all the listed companies, etc. Any knowledge they can add – over and above what a robotic value index can deliver – is rightly skill or potentially valuable alpha and the active stock-picker deserves a fee for that. But value investing is also available in generic index form.

A good example of a primitive but effective active index is the FTSE/JSE dividend plus index and its associated ETF. It invests in the Top 30 shares, with the highest forecast dividend yield over the next year out of a universe of the largest 100 stocks on the JSE. Note that ETFs, technically speaking, are listed collective investment schemes (ie, unit trusts).

We now have a three-year track record of the Dividend Plus index and the ETF fund. The results are very interesting. This robotic, rules-based ETF or passive unit trust has since its inception in August 2007 to December 2010 significantly outperformed every single actively managed general equity unit trust in SA. There are more than 100.

If a passive index tracking concept that weights shares based on forecast dividend yield alone has outperformed all general equity managers over three years (ie, a typical active fund track record period) it's telling us rules-based indices can outperform market indices like the ALSI or SWIX and add significant value to an investor's portfolio. If you'd gone long the Dividend Plus index and shorted out the market you'd have a hedge fund without any active management and decent "alpha" with low volatility.

Active indices are also not as highly correlated to the overall market as market cap-weighted indices. That provides another important benefit we haven't held in our portfolio construction toolbox yet. Most active managers are highly correlated to each other and the market, providing marginal risk benefits coupled with tenuous return benefits after costs are taken into account.

ETFs and indices have also opened up entirely new asset classes. You can now conveniently invest in gold or other precious metals, which is a valuable diversifier for pension funds and other long-term investors. Gold also can provide valuable returns during global political crises. In Europe we're seeing "scarce resources" – such as oil-related baskets and even timber or water asset classes – being made investable for pension funds through index concepts. ■

A PRIMITIVE BUT EFFECTIVE ACTIVE INDEX

August 2007 (inception) to December 2010	Total Return over period	Total Return per annum
FTSE/JSE Dividend Plus Index	57,10%	14,11%
FTSE/JSE SWIX (J403) Index	29,37%	7,81%
FTSE/JSE ALSI (J203) Index	27,24%	7,29%
Domestic Equity Unit Trust Index	7,83%	2,23%

Source: I-Net Bridge

Combining active and passive management[1]

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MSCI

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MANY INSTITUTIONAL investors consider active and passive management as two complementary (rather than mutually exclusive) approaches in implementing their equity allocation. While passive mandates offer the diversified market exposure at low cost, active mandates offer the alpha potential for institutional investors who have the resources and capacity for active management or manager selection.

Due to different levels of market efficiency, some institutional investors traditionally believe developed market large cap equities should be mainly managed passively, while emerging markets and small cap equities should be managed actively. Under such beliefs, institutional investors often structure a core satellite equity portfolio using a passive core of developed market large cap mandates combined with active satellite mandates that target emerging markets and small caps.

Contrary to traditional beliefs both active and passive management may be utilised throughout all equity market segments. We investigate the application of a core satellite structure that combines active and passive mandates across market segments, with a focus on the role of very active mandates.

For investors who employ active management there are a few important factors determining the potential magnitude of excess returns, such as:

- The level of manager skills.
- The investor's ability to identify above-average managers.
- The level of active risk the sponsor is willing to take.

Illustration 1 shows the tracking error distribution of active equity funds. It shows in each equity market segment there's a wide spectrum of active risk profiles among active managers. An important consideration for investors then is the allocation between passive and active mandates and the resulting aggregate active risk or tracking error.

You can target the same overall active risk but achieve it with very different allocations between active and passive investments. One extreme is to go 100% active, but with very tight tracking error and active exposure controls for individual mandates, resulting in a well-controlled tracking error at the aggregate level. The potential downside is that it may introduce the risk of "closet indexing".

We define the low and high active risk manager universes as the two groups of managers who have a bottom quartile/top quartile tracking error respectively.

At the other end of the spectrum you can adopt passive mandates with the majority of investments while allocating the remaining assets to high active risk mandates. The relative allocation between passive and high active risk mandates may vary, depending on the investor's target level of active risk as well as the desire to be in a position to make asset allocation decisions without hurting the active management process.

Illustration 2 shows that across different equity market segments allocating 60% of the investments to passive mandates and 40% to high active risk managers led to an active risk level similar to that of low active risk managers. By comparison, an 80/20 allocation exhibits less active risk.

Illustration 3 shows the simulated historical performance of high versus low active risk managers in the 10 years ended March 2010. Across all segments, high active risk managers achieved higher excess returns and information ratios. While some of that outperformance may be linked to survivor or selection bias, it may reflect links

TRACKING ERROR STATISTICS OF ACTIVE EQUITY FUNDS

Illustration 1

Median Tracking Error	US Large/Mid Cap	US Small Cap	EAFE/World ex US	World	Emerging Markets
Low Active Risk Manager Universe	3,1	5,5	3,3	3,6	3,3
Whole Manager Universe	4,5	8,1	4,6	6,1	4,8
High Active Risk Manager Universe	8,2	11,7	7,2	10,0	7,7

Source: MSCI, eVestment Alliance. 10 Years ending 31 March 2010. We define the low and high active risk manager universes as the two groups of managers whose have a bottom quartile / top quartile tracking error, respectively.

ACTIVE RISK PROFILE OF DIFFERENT COMBINATIONS OF PASSIVE AND HIGH ACTIVE RISK MANDATES

Illustration 2

Median Tracking Error of Different Combinations	US Large/Mid Cap	US Small Cap	EAFE/World ex US	World	Emerging Markets
40 Passive / 60 High Active Risk	4,9	7,0	4,3	6,0	4,6
60 Passive / 40 High Active Risk	3,3	4,7	2,9	4,0	3,1
80 Passive / 20 High Active Risk	1,6	2,3	1,4	2,0	1,5

Source: MSCI, 10 Years ending 31 March 2010

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between higher manager skill, higher investment conviction and/or fewer constraints.

The gap between the information ratios of high and low active risk managers has been the most significant among global managers and emerging market managers. As a result, these combinations of passive and very active managers achieved higher information ratios in each market segment.

Note that manager performance analysis can be dependent on the specific time periods and database used: therefore, the observations here may not be generalised and historical results may not reflect future performance.

For a global equity allocation that spans developed markets, emerging markets and small cap a potential core satellite structure would combine passive and very active mandates in each of those equity market segments, where the core passive mandates offer broad global equity exposure and the very active mandates reflect the investor's conviction in active management and skills in selecting active managers.

One potential benefit of such core satellite structure is that it allows institutional investors to manage more flexibly the beta exposure and the alpha component across equity market segments[2]. For example, changes to the asset allocation can be implemented through passive mandates without affecting the alpha decisions made by the satellite managers. Furthermore, it may allow both passive and active managers to focus on their core competencies.

In addition, the core satellite structure would allow institutional investors to utilise high active risk mandates, even with a modest aggregated active risk budget. High active risk mandates usually come with fewer constraints, therefore allowing managers to enter into active positions that reflect their convictions more strongly. Such mandates would also be less restricted by their respective benchmarks.

For example, Cremers and Patajisto (2009) found that funds with the highest active share (another measure of active risk) significantly outperformed their benchmarks after expenses, exhibiting strong performance persistency. Lin et al (2009) found global equity managers with larger active bets achieved higher information ratio than their peers with smaller active bets.

There are different ways of structuring the satellite active mandates. Traditionally, investors allocated mandates according to geographic building blocks, such as domestic/international. More recently some institutional investors have moved towards a more integrated global equity structure, focusing on global developed markets mandates, dedicated emerging markets mandates and specialist regional small cap mandates to implement the global equity allocation (Kang, Nielsen and Fachinotti: 2010).

Illustration 4 shows a potential core satellite structure under such an integrated global equity framework.

Conclusion

We reviewed whether different segments of the global universe exhibit different opportunities for active management. Both the degree of market efficiency and the level of stock return dispersion suggest emerging and small cap markets may offer higher active management potential. However, those segments are more costly to implement. In fact, the empirical literature and our analysis seem to indicate there's little evidence average managers operating in such markets have produced higher or more persistent risk-adjusted returns relative to their developed markets large and mid cap peers.

As a result – and against the traditional belief passive management suits developed markets – large cap and active management suit emerging markets and small cap, institutional investors may consider active and passive management as complementary

HISTORICAL PERFORMANCE OF DIFFERENT COMBINATIONS OF PASSIVE AND HIGH ACTIVE RISK MANDATES (10 YEARS)

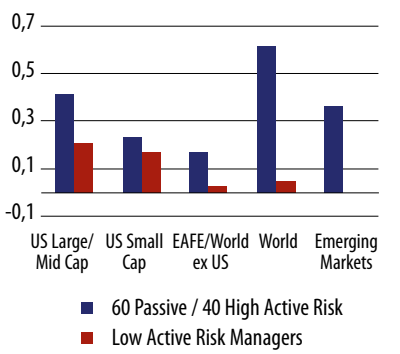
Illustration 3

Median Excess Return	**US Large/Mid Cap**	**US Small Cap**	**EAFE/World ex US**	**World**	**Emerging Markets**
Low Active Risk Manager Universe	0,77	0,86	0,06	0,20	-0,02
High Active Risk Manager Universe	4,04	3,09	1,27	5,47	3,07
Median Information Ratio	**US Large/Mid Cap**	**US Small Cap**	**EAFE/World ex US**	**World**	**Emerging Markets**
Low Active Risk Manager Universe	0,21	0,17	0,03	0,05	-0,01
High Active Risk Manager Universe	0,44	0,26	0,21	0,64	0,41
Median Information Ratio of Different Combinations	**US Large/Mid Cap**	**US Small Cap**	**EAFE/World ex US**	**World**	**Emerging Markets**
40 Passive / 60 High Active Risk	0,43	0,25	0,18	0,63	0,38
60 Passive / 40 High Active Risk	0,42	0,24	0,17	0,62	0,37
80 Passive / 20 High Active Risk	0,42	0,23	0,16	0,61	0,35

Source: MSCI

MEDIAN INFORMATION RATIO OF 60 PASSIVE / 40 HIGH ACTIVE RISK VS LOW ACTIVE RISK MANAGERS

Illustration 3



Source: MSCI, eVestment Alliance. 10 Years ending 31 March 2010. Managers' historical performance was net of management fee, and has not been adjusted for potential biases such as survivorship bias and selection bias. The management fee by peer group published by eVestment Alliance as of March 2010 was used for active products, and the management fee for passive products was assumed to be one-quarter of the active management fee.

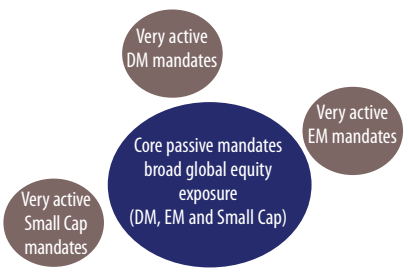
strategies throughout these different equity segments.

The core satellite structure has been revived as alpha-beta separation over recent years. It's supported by the wide availability of low-cost passive vehicles and an increasing number of very active or benchmark agnostic managers.

We examined a core satellite structure that combined passive and very active mandates across different equity market segments. Due to the outperformance of high active risk mandates during the analysed period, simulated combinations of passive and very active mandates achieved higher information ratios than low active risk mandates across segments.

ILLUSTRATION OF A POTENTIAL IMPLEMENTATION OPTION USING CORE-SATELLITE STRUCTURE

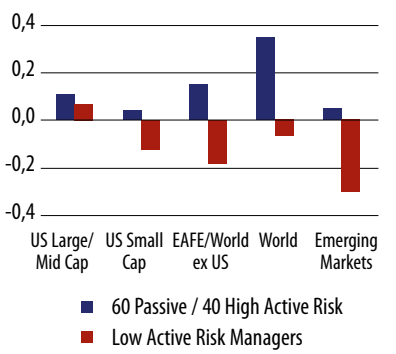
Illustration 4



Source: MSCI

MEDIAN INFORMATION RATIO OF 60 PASSIVE / 40 HIGH ACTIVE RISK VS LOW ACTIVE RISK MANAGERS

Appendix 1



Source: MSCI, eVestment Alliance. 5 Years ending 31 March 2010. Managers' historical performance was net of management fee, and has not been adjusted for potential biases such as survivorship bias and selection bias. The management fee by peer group published by eVestment Alliance as of March 2010 was used for active products, and the management fee for passive products was assumed to be one-quarter of the active management fee.

Combinations of passive and very active mandates achieved higher information ratios

Depending on investment beliefs, institutional investors might explore a core satellite structure where the active-passive split extends to each equity market segment to implement the global equity allocation.

Note

MSCI ACWI IMI denotes the MSCI all-country world investable market index that covers large, mid and small cap companies in developed and emerging markets. MSCI World covers the large and mid cap companies in developed markets. MSCI EM IMI denotes the MSCI emerging markets investable market index that covers large, mid and small cap companies in emerging markets. The weights of MSCI World, MSCI World small cap and MSCI EM IMI in MSCI ACWI IMI represent their market capitalisation weights as of September 2010.

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Footnotes

1. Note that our discussion focuses on the application of core satellite structure (sometimes known as "barbell structure") in implementing the equity allocation. Market participants also refer to core satellite as an asset allocation approach for multi-asset class portfolios, but that's not the focus of this paper.
2. Siegel et al (2009) discuss why institutional investors should make alpha and beta decisions separately. For instance: beta is not conditional on skill while alpha is only conditional on having above average skill; the reward for taking beta risk differ from taking alpha risk; and the criteria for deciding how much beta risk to take differ from deciding whether to take alpha risk.
3. Taken from Kang, Nielsen, and Fachinotti, 2010.The structure illustrated here addresses active mandates. If an investor decides to go passive across the whole global equity allocation, then the mandate structure is a less critical consideration. ■

How fund managers manage their own money

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ISERNHINKE *is investment officer at Clade Investment Management. He has 14 years' experience in asset management and began his career at Ginsburg, Malan & Carson Actuaries and Consultants, where he worked as a derivatives and quantitative analyst. He then joined PSG Escher Investments (multimanager) as a start-up venture, where he was responsible for the quantitative analysis of asset managers as well as constructing risk-profiled multimanager portfolios. At PSG Escher he initiated the inclusion of structured products as an asset class. He later joined Abvest Associates, where he established a structured products division, which grew to R5bn in assets under management. Prior to joining he was at Absa Structured Products, where he was responsible for structuring and implementing large client portfolios.*

OVER MY YEARS in the asset management industry I've noticed a striking feature: most portfolio managers manage their own money in a completely different way to the way they manage their clients' money. Because of regulatory constraints client money is managed by holding diversified portfolios with various shares and sectors over an underweighted versus a benchmark. The portfolios generally contain a few core high-conviction positions and then a large number of additional positions that may have less expected excess return but which serve to diversify and "round out" a portfolio.

With their own money, where there are no diversification requirements many portfolio managers do something very different. They hold concentrated portfolios made up of only a few shares – often not more than five or six, of the passionate (high-conviction) shares – they have identified.

These concentrated portfolios of "passionate picks" usually outperformed both the client portfolios containing the diversifying "fillers" as well as the market in general. The client portfolios typically underperform the market after fees are taken into account.

This standard portfolio construction technique dilutes the active manager's ability to add alpha to a client. While the stocks in which managers displayed the most confidence outperformed significantly, the other stocks they held, dragged down their performance.

Recent research provides powerful evidence fund managers can pick stocks that outperform the market. However, the constraints of the fiduciary management industry cause even good stock-pickers to underperform.

The 2009 Harvard Business School working paper "Best ideas" (by Cohen, Polk and Silli) examined the "best ideas" of equity mutual fund managers in the United States over the period 1991 to 2005. "Best ideas" are measured as the biggest difference between the manager's holdings and the weights in the index.

The performance of these "Best ideas" is impressive. They found a portfolio of stocks with the highest convictions from active equity fund managers outperformed the market by approximately 4% to 16%/year (depending on benchmark, risk model and definition of conviction). Outperformance for a more limited selection of high-conviction stocks (such as top five/fund) was also significant.

This novel approach to identifying manager stock-picking ability adds a new insight to the on-going debate as to whether active managers can significantly outperform benchmarks (generate alpha) or not. Previous studies on the track records of active fund managers have often led to the conclusion most active managers can't outperform their benchmarks over time. However, studies up until now only examined the total performance of a fund's holdings. As Cohen, Polk and Silli have shown, total holdings contain a watered-down version of managers' opinions.

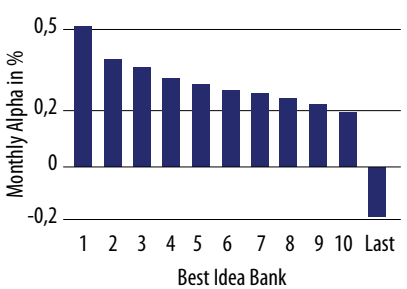
The authors conclude: "The poor overall performance of mutual fund managers in the past isn't due to a lack of stock-picking ability but rather to institutional factors that encourage them to over-diversify."

Investors would benefit if managers held more concentrated portfolios. However, the rules and incentives of the asset management industry encourage fund managers to diversify for reasons other than performance (especially with stocks that have low correlations relative to their high-conviction positions).

There are strong incentives for managers to include those "filler" negative-alpha positions. Some of the reasons managers may over diversify include:

- Regulations, such as the Collective Investment Schemes Act and Regulation 28, don't allow many investment funds to be highly concentrated. Specific rules have maximum holdings to any one stock; additionally "Prudential guidelines" make it more attractive for funds to be better diversified from a regulatory perspective.
- Liquidity management and price impact are the major concerns for fund managers. Fund managers trade-off liquidity against expected alpha when making investment decisions. A large fund

COHEN BEST IDEA MONTHLY ALPHAS



Source: Based on Graph 3 in Cohen, Polk, and Silli, 2009. Best Ideas. The graph shows the average, over the subsequent quarter, risk adjusted monthly alpha for the most overweighted stock in a mutual fund portfolio, the next most overweighted, and so on. Based on all active US equity mutual funds from 1991 - 2005.

can't invest heavily in an individual stock without affecting the stock's price; each buy pushes its price up, each sale pushes the price down. Thus there's a maximum alpha the manager can extract from any given idea.

- Many investors, particularly professional investors and asset allocators, tend to evaluate funds based on risk-return trade-offs, such as Sharpe ratios. As highly concentrated funds are very volatile, even if average returns are very high, the high volatility reduces Sharpe ratios or risk-adjusted returns. Concentrated funds therefore have a significant disadvantage in raising assets. Adding additional stocks to the portfolio can't only reduce volatility but also increase the portfolio Sharpe ratio. So managers end up holding some stocks not because they increase the mean return on the portfolio, but simply because those stocks reduce overall portfolio volatility.
- As a fund grows (particularly in a relatively small market, such as our own) managers have no option but to add more stocks until the fund becomes a closet index-tracker. Taking in more assets generates greater management fees. Consequently, managers have incentives to continue investing fund capital long after their supply of alpha-generating ideas has run out.
- The asset management industry has a strong focus on relative performance – and the corresponding fear of underperformance against a benchmark. A heavy bet on one or a small number of positions can, in the presence of bad luck, cause the manager to lose his business or his job. Many fund managers are more worried about career risk (losing their job) or business risk (losing assets under management) than they are about maximising returns for their clients.
- The asset management industry also tends to have a short time horizon, often based on quarterly and annual performances. When managers identify stocks that will outperform they may have to wait a long time for that performance to come through. The stocks may even fall or underperform significantly for an extended period before their performance manifests. Should a fund manager underperform for a year or two, investors tend lose patience and are likely to disinvest.

Managers do something different with their own money

The organisation of the asset management industry makes it optimal for managers to introduce stocks into their portfolio that aren't outperformers, even though they're able to pick good stocks. As a result, managers' personal portfolios seem to be better off (although at increased levels of risk) where they have small scale portfolios, the time to be patient and are willing and able to bet big on their highest conviction ideas.

The problem with large scale funds in the pension fund world with Reg 28 is that managers aren't able to stick their necks out and take big positions in their best ideas. Pure alpha vanishes into beta when they're forced to diversify. Therefore, many funds are run like quasi-index funds – except with considerably higher expenses.

The ideal portfolio for investors may therefore be a combination of both active and passive management. An investor can diversify his portfolio via holding index funds as a core and also then hold less-diversified active satellite funds consisting of those stocks that are the satellite manager's best alpha-generating ideas.

Combining low-cost index funds and several satellite managers allows investors to minimise their overall portfolio volatility while allowing the satellite managers to just pick stocks without the institutional constraints that encourage them to over-diversify.

Overall fees for the investor will also be lower. The index core of the portfolio will have low index tracking fees. Active management fees are only paid on the assets in the satellite portfolios; on the manager's best stock picks able to deliver large risk-adjusted returns. Active management fees aren't wasted on those stocks for which little alpha gets through to investors due to the alpha-free incentives for fund managers to diversify.

As a result, investors can benefit from active managers' "passionate picks" without having to pay high fees for the bulk of the portfolio that merely tracks the index. ■