Holistic alpha management: Deploying your active risk budget effectively

John Southall
Head of Solutions Research

As the French philosopher Voltaire said, "Uncertainty is an uncomfortable position. But certainty is an absurd one." He understood that you can't ever really know anything.

Nowhere does this ring truer than in the world of investing.

And yet any well formulated investment strategy must start with clear investment beliefs. The important point, however, is that this does not mean to say that those beliefs are immutable or that they must be followed blindly. Beliefs shouldn't be plucked from thin air, they should be well evidenced.

The weaker the evidence or rationale for the belief, the more important it becomes not to be overly reliant on it. In a world where those with the boldest, loudest opinions often get the most attention, admitting uncertainty in assumptions could be perceived as a weakness and a lack of confidence. But this is the wrong way to see it – really it is honest risk management.

There is evidence in portfolios that exposure to factors and manager skill can add value, and so this can form a sensible belief. However, if you believed alpha could only be generated in one area – and no other – this would be a somewhat strange stance. As such, one needs to be careful regarding the idea of sustainability of alpha generation in only a single portfolio area.

In a previous paper (back in January 2020) we reiterated that diversification by asset class should remain the foundation for growth strategies, and argued that diversifying into active opportunities can boost risk efficiency. In this paper, we look more closely at some of the challenges of diversifying and managing active risk - a frequently overlooked aspect of portfolio risk management - and outline practical steps investors can take to make the most of their active risk budgets.

The challenges of identifying skill

Part of the challenge of alpha management is the difficulty in identifying skill in the context of discretionary management, or rewarded risk factors in the case of factor based investing. This makes forming solid beliefs particularly tricky.

Legal & General
INVESTMENT MANAGEMENT

Figure 1 illustrates this challenge by showing the chance of getting a negative active return despite an attractive information ratio. For example, there is a 13% chance that a strategy with a respectable information ratio of 0.25 would be underwater after 20 years. This also applies to beta, although there is generally a stronger economic rationale for market exposure to be rewarded than for active positions.

Figure 1: Bad luck can persist for a surprisingly long time

Investment horizon (year)	Chance of negative return if Information Ratio = 0.25	Chance of negative return if Information Ratio = 0.50
1	40%	31%
5	29%	13%
10	21%	6%
15	17%	3%
20	13%	1%

Source: LGIM calculations, January 2021

Moreover, the volume of data isn't the only variable at play, or necessarily even the most important consideration. Managers change their approach or lose their drive, and markets adapt (due to "informed trading") so an initial strategy no longer works. By the time you have enough data to support a skilled manager, that data may have lost much of its relevance. Tales of star managers falling from grace fit this pattern. This is why past performance can only form one part of a manager selection process.

It's important to stress that difficulty in identifying alpha doesn't mean to say it doesn't exist or you shouldn't try to harvest it. **Indeed, it requires only a relatively weak belief in a diversifying strategy to justify a substantial inclusion within an overall portfolio[1].** That said, the difficulty of identifying alpha does at least underline the importance of diversifying sources of alpha.

Failure: the price of success

Diversification is a simple concept in many ways – don't put your eggs in one basket – and yet can be a cognitively jarring one in practice. This is because with the benefit of hindsight, a diversified strategy never feels like the right approach. It's too tempting to invent narratives that make past events seem obvious in retrospect. But even those who fully appreciate this may be surprised by how much failure you ought to expect within an efficient portfolio.

"It is surprising how much failure investors ought to expect within an efficient portfolio".

As an illustration, suppose you have say five uncorrelated factors where you know for a fact each earns a worthwhile, but not spectacular, ex-ante Sharpe ratio[2] of 0.2. Using simulations demonstrates that over a 30-year period you should actually expect the lowest ex-post (i.e. experienced) Sharpe ratio of these five factors to be negative. The upshot is that some strategies are likely to perform poorly, even if they're all fundamentally equally good ones.

This is important to remember before dismissing alternative return sources following a bad run. For example, the value factor has had a particularly rough patch. Whilst it's possible this could mean it is "dead" as a factor, compelling rationale for its existence and considerations such as the above should give factor sceptics pause for thought. As with many strategies, it can be hard to tell if they've stopped working or actually represent an attractive entry point.

What we see in practice

Many investors are used to the idea of holistic beta management and the benefits of multi-asset strategies. Diversification can reduce specific risks that are unrewarded, leaving you with rewarded systematic risks. Diversifying by asset class would be useful even if all returns on all possible asset classes only had one underlying rewarded risk factor. But we also believe there are multiple other rewarded risk factors to be gained from multi-asset exposure[3].

The main point of this paper is that **we believe many investors should also be thinking about holistic alpha management, which tends to be more neglected.** In practice, we tend to see the active risk budget concentrated within equities. It's understandable how this arises from a practical perspective, despite being a suboptimal strategy. Reasons include[4]:

- The expertise to generate alpha usually sits with the same manager giving you market exposure, and the investor holds a substantial amount in equities
- It's common for active risk budgets within asset classes to be sized in line with beta risk (which makes sense at an individual fund level), so active equity funds are typically taking more active risk than active bond funds
- It's easy for the manager to short (up to a point) relative to the market on a stock they don't like, simply by holding less of it. For example, taking active short bond positions if you don't hold any bonds to start with is possible but more challenging.

Practical constraints often lead to a situation where alpha risk exposure mirrors beta risk exposure, largely because of how the majority of the asset management business works, packaging alpha together with beta in a typical fund. This does not, in general, lead to the best alpha budgeting.

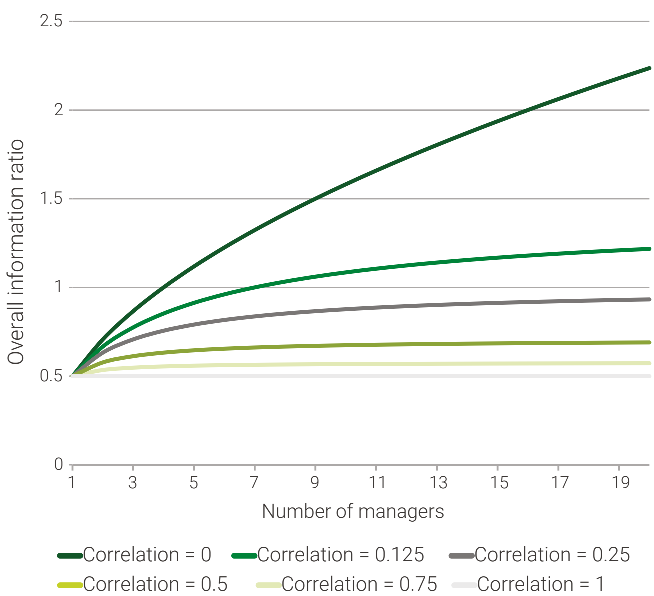
In general, a holistic perspective breaks the dependence of the alpha split on the underlying beta exposures. This leads to the idea of portable alpha, where alpha is separated from beta. The idea is that alpha is, by definition, uncorrelated with the market. As such, its composition should be independent of the beta portfolio. Whilst this can be difficult or impossible to achieve in practice, we will see that there are several practical steps investors can take to achieve a more balanced exposure to different sources of alpha.

The lowest hanging fruit

One of the downsides of concentrating the alpha budget in one asset class is that it becomes increasingly difficult to extract new sources of return. Indeed, of particular concern is the potential cancelling out of positions held, whilst paying fees and incurring other costs in the process.

To illustrate why you should be sceptical of excessive manager diversification, consider Figure 2, which shows how the overall information ratio varies with the number of managers (each assumed to have an information ratio[5] of 0.5) and the correlation between pairs of manager risks. If you could find just four uncorrelated sources of alpha and combine them equally, this would lead to an incredible information ratio of 1.0.

Figure 2: The theoretical benefits of diversifying active risk



Source: LGIM calculations, January 2021

This raises question marks over the benefits of trying to extract too much out of a single area. Either it is relatively straightforward to generate fantastically high risk efficiencies, which is very difficult to believe (because otherwise everyone would be doing it), or something has to give.

Macro alpha

There is another crucial aspect to generating alpha other than simply bolting together active single asset classes: global macro. A global macro strategy bases its allocations on the overall economics and politics of countries and the relative attractiveness of different asset classes.

Given significant evidence that markets are more micro efficient than macro efficient[6], we believe investors should reconsider this potentially rich source of alpha. Macro alpha can be cumbersome for many investors to access directly. They might not be close enough to the market or have the speed (given governance structures) needed to capture opportunities. One option that could be considered is to access macro via a dedicated fund, or to use a diversified multi-asset strategy that includes dynamic asset allocation.

Warming up: practical steps towards portable alpha

Admittedly, portable alpha is largely a theoretical ideal. But we believe there are sensible steps investors can take to diversify and harness alpha. The table below summarises the discussion, with some additional possibilities.

(1) Allocate and diversify the alpha budget - investors may wish to avoid letting one type of alpha dominate.
(2) Source skill from those who have the resources and ability. This can involve a mix of economists, strategists, analysts and portfolio managers who can also implement trades efficiently (e.g. because they have the scale to reduce costs).
(3) Don't neglect macro as a valuable source of alpha
(4) Don't neglect alpha from lower risk areas. If you are seeking rewarded risks elsewhere in your overall strategy, it can make sense to seek alpha opportunities in low or zero beta areas such as cash, bonds and LDI.
(5) Use genuinely active managers - don't pay active fees for passive products. Similarly, avoid paying discretionary fees for systematic exposures that are accessible using factor based funds.
(6) Whilst diversification of alpha is important in general, **be sceptical of excessive manager diversification** within a particular area as you may end up working against yourself.

Quantitative analysis can also help. In general, sources of return need to be proportionate to each other and combined in a way that aims to help investors meet their objectives. Models can test many different strategies; they can take into account correlations and more subtle interactions, and we aim to choose ones that strike a good balance across a range of short-term and long-term metrics.

Please get in touch if you would like to find out more about how we could potentially help you balance your portfolio across return drivers.

1. My colleague Aniket Das and I explained this in the context of factor based investing in a blog, where we show that even a little faith can go a long way, which you can read here.
2. Expected return over risk-free per unit volatility.
3. These include an emerging markets premium, illiquidity premia, a term premium on bonds in some markets and indirect access to some factors such as quality and size. This is further reason to diversify out of only equity (or only the FTSE 100) and into multiple asset classes.
4. Speculatively, it also seems likely that the fabulous outperformance of a few "star" managers who bought what William Bernstein calls "super stocks" adds to the allure of active equity management. Super stocks lead to a greater dispersion of performance in the long run than you would expect based purely on tracking error. The difficulty, naturally, is identifying the super stocks in advance!
5. Most individual managers target an information ratio of about 0.5.
6. For example, Jung and Shiller (2006) find evidence that individual firm dividend-price ratios predict future dividend growth (i.e. stocks with higher dividend yields relative to other stocks tend to have lower dividend growth) in the right direction, albeit imperfectly. But there's no evidence that aggregate dividend-price ratios do. In other words a low aggregate dividend yield on an asset class relative to history doesn't mean you can expect dividends to grow faster; rather they suggest the asset class is over-valued.

Contact us

For further information about LGIM, please visit lgim.com or contact your usual LGIM representative

Important information

Legal & General Investment Management Ltd, One Coleman Street, London, EC2R 5AA.

Authorised and regulated by the Financial Conduct Authority.

DB123722021