Actively diversified

Harnessing multiple return sources

John Southall
Head of Solutions Research

John works on financial modelling, investment strategy development and thought leadership, in addition to undertaking bespoke strategy work.

Chris Teschmacher
Fund Manager

Chris is a fund manager within LGIM's asset allocation team, and is responsible for portfolio management across the multi-asset fund range.

The long bull market in equities might seem to some like evidence against the benefits of diversification, but we believe now is the time for schemes to consider how diversification, and particularly the inclusion of alternative strategies, could help the efficient management of return generation, risk management and liquidity.

We believe the three most important focus points for trustees of defined benefit (DB) schemes are:

- to target an appropriate level of return, taking into account the scheme's funding position, and also factors such as the strength of the sponsor covenant
- to implement an LDI programme to hedge rates and inflation
- and finally, to achieve a reasonable level of diversification

In this paper, we reiterate that diversification by asset class should remain the foundation for growth strategies, and argue further that diversifying into active opportunities can help boost risk efficiency (although it should be noted that diversification is no guarantee against loss). We find that a little diversification into alternative risk premia can go a long way.

Diversified market exposure: a cornerstone for growth strategies

Broad exposure to a variety of asset classes, capturing the "beta" component of markets, is a fundamental component of long-term portfolio growth. Everyone knows the benefits of diversification in theory – don't put all your eggs in one basket. But sticking to a diversified strategy across asset classes can be harder in practice. The long bull market in equities is a prime example: it is, of course, unfair to point towards recent equity performance which, other than the last quarter of 2018, has been very good, and claim this is evidence against the benefits of diversification. Indeed, current equity valuations question the ability of the asset class to continue to generate excess medium-term returns, which we believe makes diversifying into alternative risk premia more attractive.

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To some extent it is sensible to look at historical performance, but investors should be wary of:

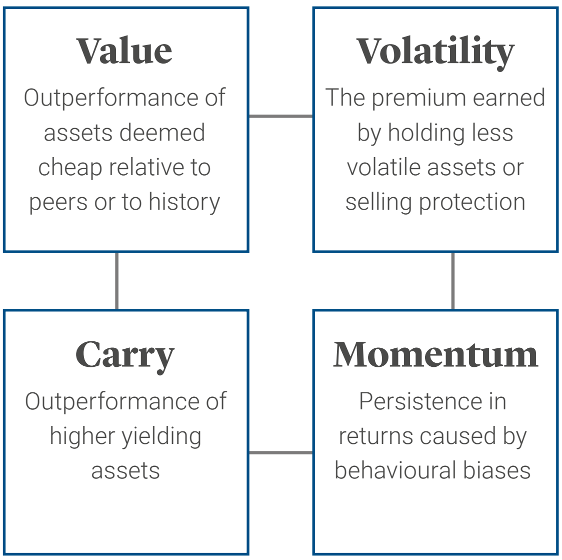
1. **Relying on too small a sample set**. A danger with some risk management approaches is looking at too short and recent a period. An example of this could be forming right now, if 10-year historical data is shown, as the global financial crisis will be dropping out. Furthermore, the fact that equities have performed particularly well with low volatility over the past few years is far from a good indicator this will continue.[1]

2. **Acting like a momentum investor over value timeframes**.[2] Investors have a tendency to base their decisions on asset class or fund returns over approximately 5-year periods. Whilst momentum (i.e. persistence of returns) is a pervasive feature of financial markets, it tends to be relatively short-lived, persisting from a few months up to about a year. The opposite (reversals to fair value) are more common over periods of around 5 years. As such, there is a danger of piling into the asset classes, funds or strategies that have done well recently, but have a tendency to underperform in the future. Indeed, this so-called "recency bias" is cited as one of the reasons retail investors tend to underperform over the long-run.[3]

Alternative risk premia: diversifying rewarded risks

The concept underlying alternative risk premia is the potential reward for taking on risk that is different to traditional market risk (beta) and yet still rewarded. These types of exposure are not reliant on being exposed to general market movements. The typical alternative risk premia that investors aim to exploit are shown below:

Figure 1: the main types of alternative risk premia



For illustrative purposes only.

But how can trustees decide which alternative risk premia to target? There has been an explosion of research into factors, with the list now stretching to hundreds, applying both within and across asset classes. Not all of these factors will be rewarded: however - just because a factor has performed well in the past does not mean it will add value in the future. Investors now have access to more information than ever to guide decision making. This is a good thing, but there is a danger it leads to spurious connections or misplaced confidence. More data does not necessarily equal better understanding: two key reasons behind this are data mining (mistaking chance for a genuine pattern) and informed trading (investors exploiting inefficiencies post-discovery).[4]

Alpha from alternative risk premia: a little goes a long way

Introducing a diversifying source of return can significantly increase return whilst only having a small impact on risk. This applies both within asset classes and across asset classes. In a blog last year we wrote about factor-based investing and how, in particular, you only need a small amount of faith in equity factors to justify moving away from passive strategies. A key part of the analysis was that the impact on overall risk (as opposed to risk relative to a market benchmark) of exposure to additional factors can be small due to the uncorrelated nature of factor exposure, which is largely diversified away.

Figure 2 (overleaf) shows how including an allocation to two uncorrelated funds can substantially boost overall risk efficiency (indicated by the Sharpe ratio) even with only a modest return assumption. In this example, Fund A targets strategically diversified beta while Fund B is a liquid alternative risk premia fund.

1. Estimating expected returns can require more data than you might think: *here*
2. An insight attributed to Cliff Asness of AQR
3. For example, *here*.
4. In general we believe that it would be helpful for investors to focus primarily on those factors where there is:
   - an economic reason, a behavioural trait or a structural anomaly as to why the factor should remain rewarded
   - a body of academic research which supports the existence of a positive return premium in the factor
   - strong empirical evidence of the factor working in multiple environments (e.g. different regions, time periods and possibly asset classes).

Figure 2: only a small return expectation is needed to justify a substantial allocation to an uncorrelated fund or strategy

	Fund A = diversified beta	Fund B = liquid alternatives fund	60% Fund A, 40% Fund B
Expected rate of return over gilts (geometric)	3.50%	1.00%	2.68%
Expected return over gilts (arithmetric)	4.00%	1.25%	2.90%
Volatility	10.0%	7.0%	6.6%
Sharpe ratio (geometric)	0.35	0.14	0.40

For illustrative purposes only. Source: LGIM, November 2019. Past performance is not a guide to the future. The value of an investment and any income taken from it is not guaranteed and can go down as well as up. You may not get back the amount you originally invested.

Targeting alpha: distinguishing the wood from the trees

There are many potential ways to generate alpha but a natural question for trustees is where they should focus most of their effort. There isn't a clear-cut answer to this, but there is now substantial evidence in favour of the argument that markets are more "micro efficient" than "macro efficient".[5] In other words, the efficient markets hypothesis works better for individual stocks than it does for the aggregate stock market.

But given that history has been punctuated with financial crises of various forms often arising from "irrational exuberance" affecting certain asset classes, it's hard to argue against the idea that markets can be macro-inefficient. For pension trustees, is it often the focus on asset allocation rather than stock selection that has proved to be most effective in driving returns.

For pension scheme trustees looking at their diversification, an unconstrained approach to investing, which is not tied to specific assets, can benefit from these structural faults in the market. Looking at diversification in terms of asset classes instead of underlying funds can help schemes take advantage of such macro-inefficiencies.

Essentially, trustees can choose between two fundamental approaches to asset management – systematic (including passive strategies and strategies that look to exploit alternative risk premia) and discretionary. Systematic managers follow pre-set rules rigidly, whereas discretionary approaches have far more flexibility.

An advantage of systematic approaches is their disciplined nature and their ability to be back-tested and scrutinised in a way that is more challenging for discretionary approaches. However, they are a double-edged sword as the very inflexibility of a systematic approach means it will follow the rules even when there are extenuating circumstances that justify a deviation. Under a discretionary approach, a manager can take a greater variety of factors into account, including their understanding of the macro environment, and rely on their judgement.

Sometimes, a combination of systematic and discretionary approaches can beat either in isolation. An interesting parallel is so-called "centaur chess". Until recently, teaming machines and expert humans in chess produced a combination that played better chess than either machines or humans on their own. A similar combination can work well within investment strategies as there are merits in both approaches, and they may be combined to complement each other in an effective way. When it comes to diversification, trustees should assess the various potential sources of return they can access and whether their approach (whether systematic, discretionary or a combination of the two) is able to fully harness them.

The DB perspective

DB pension schemes have a variety of return sources they can potentially access, and this range is broadened by the fact that for the majority, time is on their side: a longer time horizon enables them to take advantage of more illiquid investments. Managing liquidity is a key aspect of DB scheme portfolios. Identifying a mispricing, profitable trade idea or alternative risk premium, however, is one thing, while having the patience to stick with it is another. Alternative risk premia may take a longer time for outperformance to be realised, which partly explains why the market inefficiencies mentioned above arise.

Each return source should be assessed both in terms of its marginal impact on risk and return on the overall strategy, and in terms of whether it helps improve the ultimate outcomes. As we have seen, the uncorrelated nature of much active risk means that "a little can go a long way"; even a strategy that has only a relatively limited edge may deserve a place within a portfolio.

5. 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.

Models can help: they can test many different strategies; they can take into account correlations and more subtle interactions; and we can choose ones that strike a good balance across a range of short-term and long-term metrics. However, qualitative oversight is key.

A disproportionate focus by trustees on comparison with a market benchmark may discourage investment in diversified strategies (including alternative risk premia) that generate a higher tracking error, even if this makes little sense from a more objective-driven perspective.[6] But the low beta of many alternative risk premia strategies can be useful in numerous ways, from generating diversified returns to playing a potential role within "collateral waterfalls" that offer a priority order for the sale of assets, alongside more traditional options such as cash.

Trustees should adopt an approach that is not driven by tracking error, but instead looks to exploit and balance rewarded return sources and focuses on mitigating the risk of failing to meet benefit payments over the long term. Furthermore, as schemes become increasingly cashflow negative but still need to generate return, alternative premia strategies that are not market-directional and less prone to "forced sales" can be useful.

Efficiency through active diversification

We believe that the most important aim for DB schemes is to get their broad asset allocation right. This includes diversifying by asset class and region, hedging a high proportion of interest rate and inflation risk and targeting a suitable level of return given their specific circumstances. However, for schemes that have tackled these most important points, we believe that alternative strategies offer opportunities for schemes to improve both their return generation and the efficiency of their risk management. Whilst these alternative strategies require some patience (like any strategy), they may help trustees meet their aims of managing liquidity while also maintaining funding levels on their journey to endgame.

6. Indeed, this is cited as one of the reasons for the "low beta" anomaly whereby lower beta stocks tend to outperform higher beta stocks on a risk-adjusted basis.

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