

CORE/SATELLITE PORTFOLIO CONSTRUCTION

ENDING THE ACTIVE VERSUS INDEXED DEBATE

This perfect combination of active and index investment approaches works because it is based on the client's own assets allocation model

Core/satellite portfolio construction reconciles the seemingly irreconcilable debate between the respective benefits of index and active management. It provides a framework that enables asset allocation to be implemented with more purity – and potentially less cost – than portfolios limited to 100 per



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Bruce Lavine, BGI

cent active management. It can often be accessed within an open architecture environment.

Even so, core/satellite leaves plenty of room for active money managers to add value. Simply put, core/satellite blends index and active strategies together to achieve more consistent portfolio tracking to asset class benchmarks than an all-active solution provides.

Index investments, such as exchange-traded funds (ETFs), form the core, while actively managed investments constitute the satellites (see chart overleaf). Index benchmarks have long been used in the institutional arena when constructing asset allocation policy.

Today, many (if not most) large pension plans utilise a core/satellite approach to implement their investment policy more efficiently and this approach is spilling over into the intermediated retail market.

An optimal blending of the core and satellite allocations is often driven by what is commonly referred to as an “active risk budget” – how much active risk the investor is willing to assume when attempting to implement their asset allocation plan.

» RISK DEFINED

Active risk differs from market risk. Market risk is associated with the risk of the market or a manager having a negative return, and is often quantified as the annualised standard deviation of total return.

Active risk, on the other hand, is the risk of the active manager underperforming their asset class benchmark – both on market downswings and upswings. That is, an active money manager attempts to outperform their asset class/style benchmark on a relative basis, more positively on the upswing or less negatively on the downswing. This benchmark-relative return generated by active managers is called “active return”.

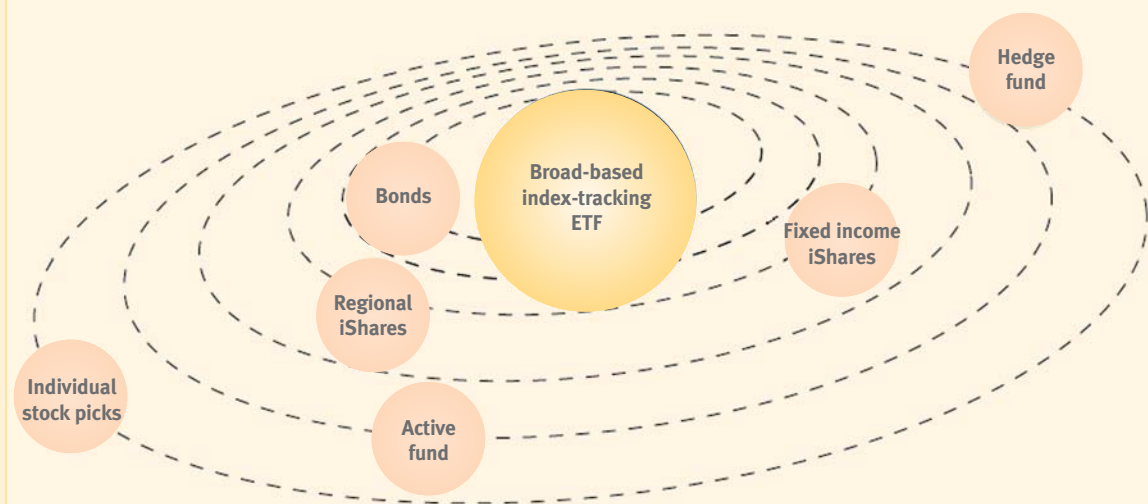
The total return risk of both asset classes and active managers is most often measured as the standard deviation of total returns, which is a measurement of variability. Similarly, active risk – again, benchmark-relative risk – can also be represented by standard deviation, but in this case it is the standard deviation of the manager's active returns.

» VARIABILITY

In this context, active risk is calculated as the manager's annualised tracking error versus a benchmark index,

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The Blending Solution



Source: Barclays Global Investors

which will signify the variability of the manager's returns relative to the benchmark.

In other words, tracking error measures the benchmark relative risks managers take when attempting to outperform indexes.

The simplest way to look at the issue is to understand that in order for a manager to beat their benchmark, they must own securities differing from the benchmark, and this difference will show up as tracking error.

Intuitively, active managers can potentially achieve increasingly higher active returns only with higher levels of tracking error, since higher tracking errors reflect the fact that the manager's portfolio is increasingly different from the benchmark. However, client tolerances for tracking error vary based on their individual sensitivity to underperforming a benchmark – over both short- and long-term time frames.

» OVERWEIGHT

For example, one way a manager might attempt to outperform is by choosing to overweight certain sectors. Another way might be to build a relatively concentrated portfolio of 25 to 50 positions that will be benchmarked against an asset class index containing hundreds or even thousands of securities.

In both the short and long term, these kinds of active portfolio decisions are not always going to prove correct. If you can find managers who are always right, then there is potentially no need for you to budget for active risk.

However, if you seek to contain the risk of the manager being wrong over any time period, then active risk budgeting through core/satellite portfolio construction is an idea worth considering.

» BUDGETING

When setting active risk budgets, important considerations include the active managers' investment styles and relative return objectives.

As stated above, if the managers aim to beat the benchmark by a lot, they must differ from the index more than managers who aim to outperform by only a little. Managers who consciously strive to beat their benchmark indexes net of management fees have an additional hurdle to clear, and this alone can require significant differentiation from their benchmark.

For example, since the average equity fund has an expense ratio of 1.5 per cent – and also has additional costs associated with trading and market impact – a built-in average hurdle of over 2 per cent per year exists. Managers must clear this simply to break even with a low-cost, low turnover index fund.

Beating the benchmark by more than 2 per cent a year without owning a set of securities that differs significantly from the benchmark – either in terms of sector or individual securities – is extremely difficult.

If the focus of modern portfolio theory is to blend asset class to achieve optimal return for a given level of risk, then active risk represents a potential threat to

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successfully delivering a consistently efficient result.

Asset allocation theory suggests portfolio construction combining diverse asset classes. The number of classes typically ranges from three to seven, including large-cap, small-cap, fixed income, and international. Each of these mandates is then defined by a representative benchmark index.

» REPRESENTATION

For example, a large-cap US equity mandate could be represented by either the S&P 500 index or the Russell 1000 index; a small-cap US equity mandate by the S&P 600 or the Russell 2000; and so on.

Further, the managers hired to fulfil distinct style allocations would be benchmarked to style indexes such as Russell 1000 Growth or S&P 500/BARRA Growth.

Although one could reduce cost and avoid style drift by simply investing 100 per cent in the index funds that correspond to the benchmarks, many clients attempt to outperform by selecting active managers. The key concept to drive home for clients is that to seek active return – to beat benchmarks – one must necessarily accept a certain amount of active risk.

Only an index fund avoids taking on significant active risk. The trade-off is that an index fund cannot generate the high active returns that some managers deliver. However, identifying in advance those active managers who can consistently provide an optimal balance between risk, return and cost is difficult at best, and may result in investors failing to achieve consistently optimal asset allocations.

Core/satellite portfolio construction attempts to resolve this dilemma in that it originates from the client's asset allocation model. The implementation of the core/satellite structure occurs after an allocation study that, for example, might optimise allocations to stocks and bonds, sizes and styles, domestic and international, and fixed income maturities.

Within these parameters, core/satellite allocates to both active and index investments – with a core index component that can be a broad market index fund, or potentially index funds for each of the asset class and/or style segments.

For example, large-cap might be given an active risk budget of two, while small-cap might be budgeted at eight. No matter the active risk budget, the purpose of core/satellite is to manage active risk while not completely forgoing the opportunity to garner active return.

Not surprisingly then, implementing a core/satellite structure is remarkably similar to the decision-making dynamics of traditional asset allocation.

» TURN THE DIAL

The primary task is to identify the level of risk that is appropriate to the client – to set the active manager risk budget(s).

One can budget a pre-fee level of active risk approximating zero – the approximate risk involved in a well-managed index fund before fees – or as high as that presented by the investment manager candidates tracking error versus the asset class benchmark (and would assume 100 per cent allocation to that manager).

Again, this can be done either for the managers individually versus their style benchmarks or in combination versus a benchmark for the total portfolio.

Typically the risk budget targets a position between the full allocation to either active or index. Turn up the "risk dial" for more active risk, devoting more resources to the satellite active manager or managers; turn it down to reduce active risk, devoting more resources to the core index fund or funds. Core/satellite portfolio construction thus quiets the debate between index versus active.

*Bruce Lavine, head of iShares Europe,
Barclays Global Investors*

» CORPORATE STATEMENT

Barclays Global Investors is one of the world's largest asset managers, providing structured investment strategies such as risk-controlled active strategies and indexing. BGI managed \$1200bn in assets as of 30/6/04, and over 2300 funds for more than 2500 clients in 47 countries around the world. BGI is an innovator in investment management, applying science and technology to the investment process. BGI is owned by Barclays PLC, a leading global financial services provider.

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