Navigating Satellites in a Core-Satellite Portfolio Construction
Guidelines for Effective Choices

By Clifford Stanton, CFA®, and J. Gibson Watson III, CIMA®

Since the financial crisis of 2007–2008, advisors have spent a good deal of professional energy helping investors rebuild damaged portfolios. Along the way, virtually every piece of the investment process has been re-examined, from investment policy and risk management to portfolio construction. Clearly, the ability to craft institutional-grade portfolios for retail investors is critical for any advisor looking to differentiate in today’s crowded marketplace. We suggest a number of construction guidelines that could lead to that desirable end.

Portfolio Construction as a Core Competency

It wasn’t that long ago that most retail asset allocation programs were designed to include a relatively limited number of asset classes—domestic equity, domestic fixed income, international developed equity, maybe emerging markets equity or domestic real estate. Although the resulting allocation models delivered acceptable diversification and long-term risk management, they tended to ignore the more institutionally accepted asset classes, such as floating rate loans or emerging markets debt, and therefore didn’t necessarily offer an optimal risk-return profile to investors.

Leading financial advisors, meanwhile, with memories of the 2008–2009 meltdown still top of mind, began looking for more active approaches that allowed for greater investment flexibility when market conditions and/or client situations changed. In response, allocation methodology moved to become more dynamic and diversified. Core-and-satellite portfolios built with an emphasis on quantifying and assessing risks, manager selection, and benchmarking emerged as a dominant construction model. Not too surprisingly, alternative investments began playing a progressively more important role in the process.

While core-satellite investing can mean a lot of things to a lot of people, generally speaking the approach combines passive and active strategies and seeks an appropriate balance between the more efficient corners of the market (the core) and the less efficient, alpha-producing areas such as emerging market bonds, floating rate loans, emerging markets equity, and liquid alternatives (the satellites), as shown in figure 1.

This method of portfolio construction is designed to minimize costs, tax liability, and volatility while providing an opportunity to outperform the broad stock market over time. Broadly diversified core-satellite portfolios, by including less-correlated satellite asset classes, theoretically will produce lower volatility than those employing less-refined asset allocations. This appealing outcome potentially increases the likelihood that an investment objective will be achieved and, just as importantly, the investor will remain on track toward that elusive goal.

The Call for Additional Asset Classes

Truly robust asset allocation demands access to the full universe of global

![FIGURE 1: CORE-SATELLITE PORTFOLIO CONSTRUCTION FRAMEWORK](https://example.com/figure1.png)
investment opportunities. For years, retail approaches came up woefully short on delivery. For example, U.S. total debt by market value accounts for only 36 percent—a little more than one-third—of the Barclays Global Aggregate Index\(^1\) and yet most retail investors have little, if any, exposure to non-U.S. fixed income. Given where we sit in the interest-rate cycle, investors would be well-served by expanding their horizons and allocating to fixed-income managers with the expertise to invest globally in investment-grade debt, high-yield debt, and/or emerging-market debt. (There are additional risks when holding non-domestic fixed-income securities, of course, but properly managed, those risks can be mitigated at the total portfolio level.)

Similarly, consider that U.S. equities make up just 47 percent of the Russell Global Index\(^2\)—not even half—and yet most retail investor portfolios still exhibit massive home-country bias. According to the Investment Company Institute, 77 percent of mutual fund retirement equity assets reside in the domestic equity asset class.\(^3\) Institutional investors, on the other hand, have been migrating steadily toward global equity mandates and away from dedicated regional and style specialists. They’ve done so for a number of reasons, the least of which is that where a company is domiciled is of little importance in a world dominated by global concerns. The bottom line is that utilizing global and international equity initial funding in 2009.\(^5\)

It is essential to make sure, however, that the manager you select can exercise all of this nimbleness effectively. A fund’s asset capacity, or lack thereof, can have real impact on a given strategy’s opportunity set.

**Understanding the Active Manager**

Over time, we all come to know that some investment strategies are more compelling than others. “Investment edge” is a term often quoted by investment managers that loosely translates, “I have a way to beat the market.” As a provider of due diligence services, it’s a claim that inevitably compels us to dig deeper.

Fact is, the importance of understanding the thinking behind business and investment decisions at an asset management firm cannot be overstated. That’s why we suggest homing in on why managers do what they do—their rationale, in other words—rather than settling for the necessary factual data that shows what they do and how they do it.

The following line of questions may help you discover whether your manager has a defensible investment edge that is truly differentiated, repeatable, and sustainable.  

**Question 1:** What inefficiency are you attempting to exploit? Is there research or evidence that suggests that the inefficiency actually exists?

**Question 2:** What differentiates your investment strategy from the rest of the asset management world? What distinctive strength do you possess to exploit the inefficiency?

These two questions, which really speak to informational advantages—execution and experience—may help get to the heart of whether or not the manager actually possesses an investment edge. (Don’t forget that even traditional pockets of inefficiency, such as distressed securities, spinoffs, and micro caps, can be picked over.)

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\(^1\) Barclays Global Aggregate Index
\(^2\) Russell Global Index
\(^3\) Investment Company Institute
\(^4\) National Small Cap
\(^5\) Funding in 2009
You’ll probably find that informational advantage is the most commonly cited investment edge, particularly among international funds. Many bottom-up fundamental managers simply work harder, get more creative, or devote more resources to unearthing the information they need.

**Question 3:** Is there consistency/persistence of your edge? How do you as a manager adapt to a disappearing market inefficiency?

Over time, markets evolve and competitive forces can negatively impact arbitrage opportunities within an investable universe. Managers should systematically measure their results for proof that what they believe is effective continues to be so. Certain asset managers perform research to continually refine inputs to their models although their basic philosophies have never changed. Also, beware that an edge can disappear due to the evolution of the investment manager itself, such as capacity. For instance, a micro-cap manager that was able to outperform with a $20-million portfolio five years ago may have a more difficult time doing so with a $200-million portfolio today.

**Special Strategies Need Special Attenions**

In a recent research report, McKinsey & Company details how the use of alternatives is becoming more common among retail investors. This mainstreaming of these strategies is due in large part to the rapid growth in the number and variety of ‘40 Act funds employing hedge fund-like strategies—the so-called “liquid alternatives.” Growth in investor demand for these offerings, which are typically less correlated to traditional equity and fixed-income asset classes, has risen commensurately with the increase in market volatility over the past few years.

While the decision to add exposure to alternatives is fairly straightforward, implementation of that decision—despite the improved access to open-end fund opportunities—is still complex. Investors and their advisors are faced with a considerable amount of due diligence to ensure that the most appropriate alternative investment funds are selected, including a full vetting of each fund's investment strategy, performance behavior, and risk attributes. A few points to consider would include the following:

- Does the investment improve the opportunity set from which to generate positive expected returns?
- Does the investment hedge a particular risk already contained in the portfolio that either doesn’t offer an adequate payoff or to which the investor is overexposed?
- Does the investment provide true diversification benefits by generating a return stream that is substantially different from mainstream asset classes such as domestic stocks and bonds?

Advisors also should prepare to address issues such as relatively high expense ratios, a small number of fund offerings, short actual track records, and limited portfolio transparency. In addition, advisors need to continually monitor the effectiveness of these strategies as they become more popular. As the number and size of liquid alternative products increase, there is a risk that the inefficiency these strategies are attempting to exploit may erode, particularly in comparison to their less-constrained hedge fund brethren.

Given the unique characteristics of underlying alternatives strategies, it’s difficult to throw them into the portfolio optimization blender and obtain meaningful output. Determining the amount to allocate to alternatives and how that exposure should be constructed requires a careful and thoughtful approach. Is the objective to mitigate left tail risk of the overall portfolio? Is the investor simply looking to reduce volatility and generate a more stable return stream? Is there a desire to improve the overall portfolio’s risk/return profile? Whatever the objective, establishing a framework for implementing alternative investments in a retail portfolio starts with the basic tenet that there is no free lunch.

**Different Risks, Different Rewards**

No matter how you look at it, investment returns come from taking on some kind of risk. In a traditional, long-only, diversified portfolio of stocks and bonds, the major sources of risk are typically equity beta and interest rates. Alternatives, too, carry risk, but the reward potential differs greatly depending on the strategy. To that end, a wealth manager must identify the kind of risk a particular strategy brings and diversify that risk across an investor’s portfolio.

How different are the strategies? Here are just a few examples:

**Merger-arbitrage managers invest in the securities of companies in the midst of an acquisition or merger.** Generally, the strategy makes money if the deal closes and loses money if it doesn’t. Obviously there is risk involved here, but the payoff has little to do with the direction of the stock market or interest rates in normal times. Note, however, that if the market crashes, deals blow up and a merger arbitrage strategy can become more correlated to the equity markets at exactly the wrong moment.

**Managed futures strategies are based on sophisticated trend models.** A manager will buy and sell futures across multiple asset classes based on whether he or she can identify a directional trend in an asset class. The payoff for this kind of strategy is not necessarily contingent on having a strong upwardly trending market. These strategies can capture downward trends as well, which makes them ideal diversifiers and risk mitigators.

**Long-short equity strategies attempt to buy stocks that are attractive and sell those that are not.** Generally, managers of these strategies will end up buying more
than they short, leaving them with overall exposure to the equity markets. Long-short equity differs from the previous two examples in that the payoff is sensitive to the up and down movements of the stock market. In this way, long-short strategies have similar, albeit potentially less, risk exposure than most long-only equity strategies.

Also worth noting is the emergence of what are called “fund strategist portfolios,” or FSPs. Like liquid alternatives, FSPs have grown rapidly as advisors seek additional sources of alpha. Typically, FSPs are tactically managed portfolios consisting of open-end funds and/or exchange-traded funds and are designed to exploit what the strategist perceives as favorable opportunities. For example, instead of remaining fully invested across market cycles, an FSP may move into cash in times of high volatility. Given the wide variety of FSPs on the market, identifying the most-appropriate offering for a particular situation takes careful due diligence and analysis. The right choice, however, can yield dividends when building the satellite portion of a portfolio.

**Getting It Right**

Achieving the optimal mix of alternative strategies in an otherwise long-only, equity/fixed-income portfolio often seems counterintuitive. For example, given the low and negative correlations of certain types of fixed-income replacement alternative strategies, more conservative portfolios tend to include greater allocations to alternative strategies than do aggressive portfolios.

Figure 2 shows two asset allocation designs for hypothetical aggressive and conservative investors.

No matter how the optimal mix is determined, the increasing popularity of alternatives means more portfolios are carving out space for a dedicated allocation to nontraditional investment strategies. The best way we know to approach this task is to identify the existing risk exposures in a portfolio and select alternatives that have similar volatility and return profiles, with noncorrelated risks. It’s a good bet that choosing alternatives within this framework will help reduce

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**FIGURE 2: USE OF ALTERNATIVE STRATEGIES IN CONSERVATIVE VS. AGGRESSIVE PORTFOLIOS**

<table>
<thead>
<tr>
<th></th>
<th>Aggressive</th>
<th>Conservative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Return</td>
<td>8.8%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Risk</td>
<td>17.6%</td>
<td>5.4%</td>
</tr>
<tr>
<td>Expected Return per unit of Risk</td>
<td>0.5</td>
<td>0.96</td>
</tr>
</tbody>
</table>

Note: The expected risk and return calculations for each portfolio are based on the underlying allocation to the asset classes. The expected return is based on Envestnet | Prima’s proprietary capital market assumptions and risk is representative of the historical standard deviations of representative benchmarks to the asset classes. Date range for historical risk (standard deviation) is June 1, 2002–May 31, 2012. Any graph, chart, formula, or other device being offered cannot in and of itself be used to determine which securities to buy or sell, or when to buy or sell them. Limitations of expected return include the uncertainty in predicting future market returns and economic performance.
a given portfolio’s overall volatility by diversifying its overall risk.

Pulling It All Together

To help bring these investment concepts to life, let’s consider the composition of a series of target risk portfolios using these principles. The portfolio series consists of five fund-of-fund portfolios across the investment risk spectrum, ranging from conservative to aggressive. By evaluating the full universe of available options from an open-architecture framework, the underlying mutual fund investments may fill the core-satellite construct as shown in table 1.

To measure the performance of fund-of-fund asset allocation portfolios it is helpful to consider three sets of different benchmarks.

First, to evaluate whether the asset allocation exposures have added value, compare the portfolio performance to a series of benchmarks that matches the maximum equity risk embedded in the portfolios. For example, the best-fit benchmark for the balanced model in table 1 may be a blended index consisting of 60-percent Russell Global/40-percent Barclays Aggregate.

Next, attribution analysis on the portfolios helps determine if the active managers have added value. By comparing each portfolio to a custom benchmark that mirrors the portfolio’s asset allocations, you can identify whether the active managers outperformed or underperformed the passive version of the portfolio.

Perhaps most importantly, compare performance versus a peer group. When managing fully diversified asset allocation portfolios, myriad decisions are made at the asset allocation, manager selection, portfolio construction, and risk management levels. The peer group in effect captures all the decisions that could have been made, and it therefore serves as a proxy to assess the sum total of all decisions.

Bottom Line

If you’re considering the use of core-satellite techniques to enhance portfolio and risk management capabilities, consider global mandates with nimble, opportunistic managers for the satellite portion of the portfolio. You are, after all, hiring for alpha generation. Keep a close eye, of course, on how these alpha producers combine with each other—you don’t want your managers loading up on the same assets at the same time. In the end, the managers representing your clients’ assets in these parts of the allocation equation need to be of the highest quality and closely monitored, especially those in the alternatives sleeve. A good blend is more than the sum of its parts.

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| TABLE 1: SAMPLE ASSET ALLOCATION PORTFOLIOS AND CORE-SATELLITE POSITIONING |
|-----------------------------------------------|--|--|--|--|--|---|
|                                | Aggressive | Growth | Balanced | Moderate | Conservative | Portfolio |
| US Equity Large Cap            | 27.1%      | 20.2%  | 14.4%    | 9.0%     | 3.6%         | Passive Core |
| US Equity Mid Cap             | 15.9%      | 11.8%  | 8.5%     | 5.3%     | 2.1%         | Passive Core |
| US Equity Small Cap           | 2.0%       | 1.5%   | 1.1%     | 0.7%     | 0.3%         | Active Satellite |
| International Equity Large Cap | 21.9%      | 18.5%  | 13.3%    | 7.1%     | 1.9%         | Active Satellite |
| International Equity Small Cap | 1.2%       | 1.0%   | 0.7%     | 0.4%     | 0.1%         | Active Satellite |
| Emerging Markets Equity       | 19.8%      | 14.5%  | 9.3%     | 5.5%     | 2.0%         | Active Satellite |
| Commodities                   | 2.3%       | 2.5%   | 2.8%     | 3.0%     | 3.0%         | Active Satellite |
| Floating Rate Loans           | 0.0%       | 4.0%   | 8.5%     | 14.8%    | 17.5%        | Active Satellite |
| US Investment Grade Fixed Income | 0.0%      | 0.0%   | 0.0%     | 7.3%     | 19.5%        | Passive Core |
| US Inflation Protected Fixed Income | 0.0%     | 0.0%   | 0.0%     | 1.5%     | 2.0%         | Active Satellite |
| US High Yield Fixed Income    | 0.0%       | 3.3%   | 5.0%     | 5.3%     | 5.5%         | Active Satellite |
| International Investment Grade Fixed Income | 0.0%   | 0.0%   | 0.0%     | 1.5%     | 3.5%         | Active Satellite |
| Emerging Markets Fixed Income | 0.0%       | 2.8%   | 6.5%     | 8.5%     | 6.3%         | Active Satellite |
| Alternative Strategies        | 10.0%      | 20.0%  | 30.0%    | 30.3%    | 29.8%        | Active Satellite |
| Cash                          | 0.0%       | 0.0%   | 0.0%     | 0.0%     | 3.0%         | Active Satellite |

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active risk is typically small, but because of significant diversification between active and passive investment decisions, the implied stand-alone active risk or tracking error is typically 2–4 percent. If one can put together a team that has an annual asset class information ratio of 0.25 (typically a second-quartile manager), the addition to passive return can be 1–2 percent, given an empirical 2:1 risk diversification across asset classes.

In a pension context, plans should use asset-liability risk. In practice, however, we often are prevented from doing so by restrictions on leverage, or borrowing, which is (usually erroneously) viewed as adding to asset-liability risk.

References

Endnotes
1 Source: Barclays Capital as of November 15, 2012.
2 Source: Russell Investments as of September 30, 2012.
3 Source: Investment Company Institute Q2 2012.
4 75 percent of international small-cap funds have outperformed the S&P Developed Ex-U.S. Small Cap over the trailing five years ending June 30, 2012. Source: S&P Dow Jones Indices SPIVA Scorecard.
5 Source: MSCI Research.

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