Institutional Portfolio Management

The mission and the mandate.

Mark Anson

This article completes a three-part series for *The Journal of Portfolio Management* on implementation of the institutional investment mission and the product mandates to be placed in those portfolios. In Anson [2004a] I discuss the balance between strategic and tactical asset allocation and the use of beta versus alpha drivers to accomplish those complementary goals. In Anson [2004b] I describe how pension funds and other institutional investors need to think beyond the benchmark in order to find alpha-driven portfolios. Now I extend these ideas to the implementation of alpha and beta products for institutional investor requirements.

There is a hierarchy in every institutional investment process: the upstream investment staff of the institutional investor, who decide on the investment product to purchase, and the downstream institutional money managers that provide the product for sale. First, I examine the interplay of alpha and beta drivers. Then I examine their flaws and potential improvements. Finally, I offer some practical suggestions for constructing efficient portfolios of beta plus alpha.

INSTITUTIONAL PORTFOLIO MISSION

Generally, the board of trustees of a pension fund, endowment, or foundation establishes the strategic allocation across major asset classes. Strategic asset allocation represents the translation of an institutional investor's investment policy. This process identifies strategic bench-

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marks tied to broad asset classes that establish the *policy risk* for the fund. This is also known as the *beta* or *market risk* for the fund.

Strategic asset allocation is not designed to beat the market. Instead, it is designed to meet the long-term funding goals of the organization such as paying retirement benefits, supplementing a university budget, or providing for philanthropic donations. It is the process by which long-term assets are matched against long-term liabilities.

Tactical asset allocation facilitates an institutional investor's long-term funding goals by seeking extra return. It does this by taking advantage of opportunities in the financial markets when markets appear to be out of line with fundamental economic valuations. As a result, tactical asset allocation requires more frequent trading than strategic asset allocation. This process uses actively managed investment products as alternatives to passive benchmark risk.

Typically, a board of trustees delegates both forms of asset allocation to the investment staff with goals summarized as follows:

Goal #1: Implement the strategic asset allocation as established by the board of trustees in as efficient and as cost-effective a manner as possible.

Goal #2: Seek added value through tactical asset allocation.

Together, these two goals are designed to ensure the funding of the long-term liabilities associated with an institutional fund while seeking long-term growth to minimize the amount of future contributions. These goals have implications for the design of institutional products and the management of institutional portfolios.

In Anson [2004a] I describe a simple way to divide an institutional portfolio into two asset classes: alpha drivers and beta drivers. Beta drivers provide broad economic exposure to the financial markets. They target the policy or market risk for the fund. These products seek to fulfill goal #1—implement the strategic asset allocation in a cost-effective manner.

Alpha drivers seek to achieve goal #2—the objective is outperformance of the policy benchmarks established by the board of trustees. The investment staff selects investment products to meet this goal by adding extra return to the institutional portfolio over and above that offered by the broad financial markets. An alpha driver can be used as a tactical bet against a policy benchmark when the financial markets are misaligned, or as a way to generate added value from alternative sources of return distinct from the policy benchmarks.

This prompts the question of the optimal implementation. Should we require that all products serve both goals, or can we divide the two goals and find products that separately target the beta (goal #1) and the alpha (goal #2)? In fact, pursuing both goals simultaneously can lead to inefficient results.

DOES CURRENT ASSET MANAGEMENT SATISFY THIS MISSION?

In many cases, investment products try to satisfy our two goals, but with unfortunate results. Consider Exhibit 1, which represents a large-cap active U.S. equity manager. According to this manager's published materials:

> [The manager] seeks capital appreciation by using fundamental analysis of each issuer's financial condition and industry position and market and economic conditions to select investments.

We plot this active manager's returns compared to those of the S&P 500. The performance exactly parallels the up and down movement of the S&P 500 as demonstrated by the nice straight line. Further, this manager offers a beta of 1.00 and a correlation with the S&P 500 of 0.99. Despite this manager's claim to active management, it is a linear beta driver—its performance matches that of the S&P 500.[1]

As a comparison, consider Exhibit 2. This is a passive U.S. equity index product benchmarked to the S&P 500. Index products offer efficient exposure to the financial markets, but no attempt is made to extract value. Their goal is simple: to match a broad financial market index as cheaply as possible, and take no bets. Both Exhibit 1 and Exhibit 2 offer nice straight lines; any difference is minuscule.

We submit that Exhibit 1 represents a flawed product. But who is to blame for this defective product? Is it the investment staff who purchase the large-cap active equity product in Exhibit 1 in an attempt to capture alpha, or is it the institutional money manager that sells a beta product disguised as an alpha product?

The answer is both. For the investment staff, the product in Exhibit 1 fails both goal #1 and goal #2. First, this combined product does not efficiently implement the strategic asset allocation of the board of trustees. This large-cap U.S. equity manager charges a little more than 70 basis points a year in management fees. This is too

EXHIBIT 1
Large-Cap Active Equity Manager

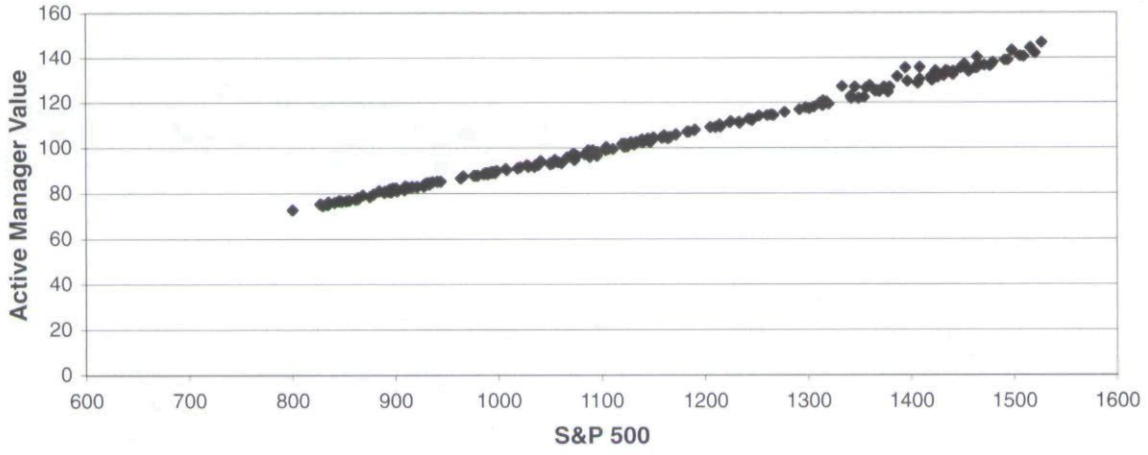
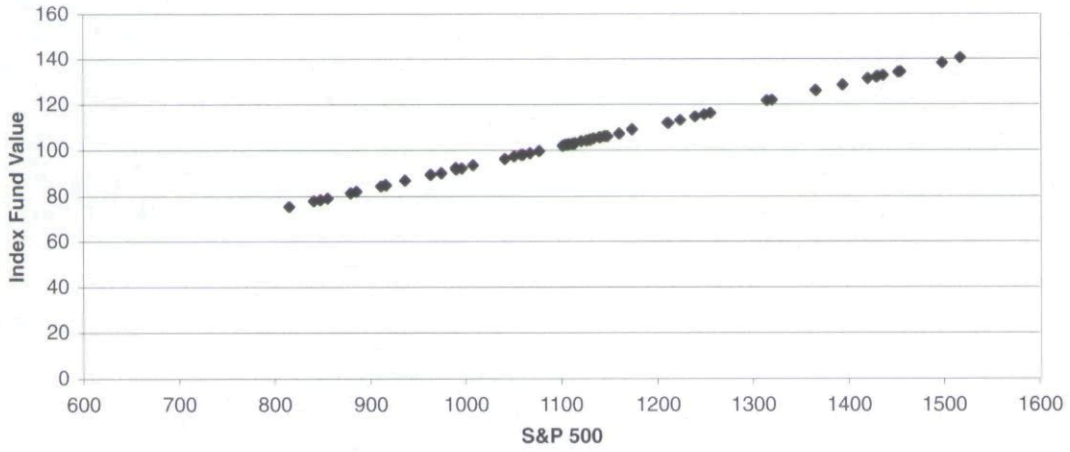


EXHIBIT 2
Index Fund Benchmarked to S&P 500



expensive to be a cost-effective beta driver. In addition, the product fails goal #2 because it has underperformed the S&P 500 on average by about 70 basis points a year. In fact, the underperformance of this active large-cap equity manager compared to the S&P 500 is coincident with its management fee.

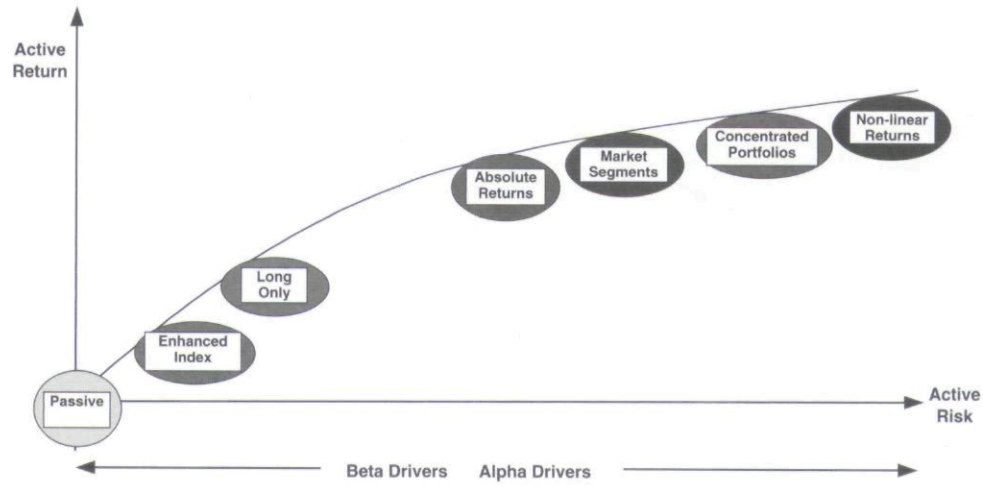
To extend this analysis further, we submit that Exhibit 1 should not be part of a sustainable business model for institutional money managers. Sooner or later, the investment staff will catch on to the fact that the large-cap active equity product really mimics the S&P 500 without adding any value. In fact, this product has annually underperformed the S&P 500 on a very consistent basis.

We submit that an investment product that satisfies neither goal #1 nor goal #2 of the investment staff is not a sustainable product. Similarly, we submit that an institutional money manager whose business model is built on such products has a flawed business plan.[2]

THE MANDATE: SEPARATE BETA AND ALPHA PRODUCTS

This discussion does not seek to discredit beta drivers. Beta drivers are an essential building block in institutional portfolios. They manage the policy risk for the fund as established by the board of trustees and thereby accomplish goal #1. Alpha drivers are used after the beta

EXHIBIT 3
Separating Alpha Drivers from Beta Drivers



drivers are in place to accomplish goal #2—adding value.

We can accomplish both goals in separate processes. This leads to the bifurcation of investment products presented in Exhibit 3.

In the traditional model, institutional portfolios find alpha but only when it is attached to beta. That is, pension funds and other institutional investors first make the allocation to strategic benchmarks to establish the policy risk of the institutional portfolio, and then the investment staff tries to squeeze alpha out of these policy benchmarks. As a consequence, alpha budgets are often misspent on the most efficient markets—those represented by the strategic benchmarks.

In the new business model, alpha is independent of beta. Beta drivers still implement the strategic asset allocation established by the board of trustees, but the investment staff can seek alpha from investment products that are outside the benchmark (see Anson [2004b]).

More to the point, alpha risk budgets should not be spent on strategic benchmarks. Strategic benchmarks are designed to offer efficient beta exposure—the last place to look for extra value. Alpha risk budgets should be spent in less efficient markets: hedge funds, absolute return strategies, concentrated equity portfolios, high-yield, small-cap stocks, emerging markets, and corporate governance.

In fact, alpha can be sought in one asset class and "ported" to a second asset class, moving in between the benchmarks. For example, short-term active fixed-income money managers can extract an alpha from trading in short-term money market instruments. When combined with equity stock index futures, this alpha moves from one benchmark (short-term fixed-income) to a different benchmark (a stock market index). Other products cannot be bifurcated as easily to get at the core alpha; there may be residual risk of convexity such as that associated with credit derivatives.[3]

Take a closer look at Exhibit 3. This graph defines products by their contribution to active risk and active return. At the zero axis, we find (passive) index products. These products take no active risk, extract no added value, and are devoid of information (in fact, they toss any information aside). All they do is passively capture the risk premium associated with a risky asset class.

Slightly above index products we find enhanced index products—products designed to take small amounts of risk within tightly controlled parameters and to offer a little extra return, usually on a large pool of capital. Small but consistent alpha is their game.

Next, just slightly above the enhanced indexes we find the traditional active manager. As Exhibit 1 demonstrates, however, these products are often beta drivers dressed up in alpha driver clothing.

Collectively, these three products form the strategic core for the institutional portfolio. These products satisfy goal #1 for the investment staff—cost-effective implementation of the policy risk for the institutional portfolio, although sometimes a traditional active manager will charge high fees for delivering a product that has considerable beta risk and only a smidgen of alpha risk.

Exhibit 3 then has a large gap between the beta drivers at the lower end of the active risk-return scale and the alpha drivers presented at the higher end of the risk

and return scale. The alpha drivers are designed to accomplish goal #2—adding value to the portfolio.

Note that this gap does not necessarily need to be as wide as depicted in Exhibit 3. Well-designed alpha drivers can be de-levered to match their tracking error along the active risk spectrum. We draw Exhibit 3 with a gap to highlight the difference between alpha and beta drivers in their natural state of active risk-taking.

Alpha is not static. Over time, alpha can migrate and become beta. Asness [2004], Jaeger [2002], and Jensen and Rotenberg [2003] provide several examples of investment strategies that had once been considered manager skill, i.e., alpha, but are now regarded as a systematic capturing of current risk premiums, i.e., beta. Darnell [2005] suggests alpha strategies go through cycles of profitability: sometimes in favor, sometimes out of favor.

ALPHA PRODUCTS

In Exhibit 3 we have defined active risk relative to a broad stock market index like the S&P 500, and the alpha drivers are plotted according to the amount of active risk they take relative to the stock market. This ranking is discretionary; other investors might structure their alpha portfolio so that these drivers are arranged in a different order of active risk.

We identify four general alpha drivers:

- Absolute return strategies: Absolute return strategies are primarily hedge fund strategies that unchain hedge fund managers from a stock and bond index so they can pursue value-added strategies regardless of size, market direction, or benchmark restrictions. Many hedge fund managers simultaneously pursue long and short investment strategies to extract the greatest value associated with their financial market insights. A diversified portfolio of such strategies would be expected to have a low correlation with broad financial market indexes, especially measured over a full market cycle.
- Market segmentation: Often investors deselect themselves from certain markets. Many investors avoid the junk bond market because of the default risk associated with these securities—companies offering high-yield bonds often fail by way of bankruptcy. Most institutional investors are prohibited from investing in below-investment-grade bonds, while others eschew this market because it is less liquid than the market for investment-grade securities. Consequently, the high-yield market is segmented by its level of credit risk as well as by its lack of liquidity.
- Concentrated portfolios: Most traditional active managers tend to hug their benchmarks and maintain well-diversified portfolios (*see Exhibit 1*). Diversification is a way to minimize the risk of underperformance, but at the same time it *minimizes the probability of outperformance*. Concentrated portfolios frequently have significant tracking error to an established benchmark, but offer a greater opportunity for excess return.
- Non-linear return distributions: Non-linear return functions exhibit option-like payoffs with a kinked distribution. Examples are merger arbitrage, managed futures, and convertible bonds. This type of return distribution can be particularly useful combined with a linear beta driver (see Anson [2004a]).

Exhibits 4 and 5 plot the first of the four alpha drivers: the returns of CalPERS' absolute return strategies program versus the stock and bond markets. With respect to both stock and bond markets, the ARS program has a low beta coefficient and a low R-squared measure. This demonstrates that the returns to this program are mostly not affected by the systematic market risk found in the bond and stock markets. Note in Exhibit 4 that the values for the ARS program are much less dispersed than the returns for the S&P 500. The ARS program simply has less volatility than the stock market.

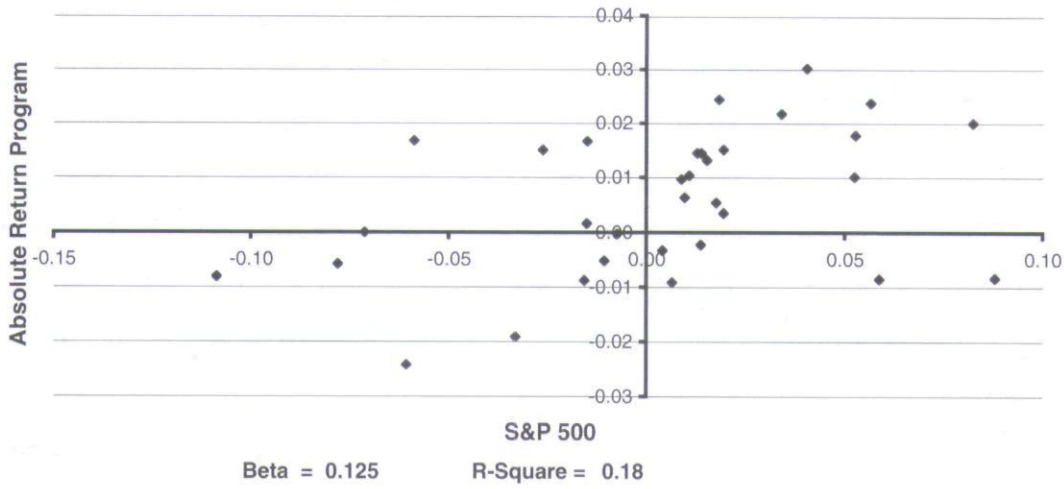
In fact, Exhibit 5 shows the dispersion of returns for the ARS program is very similar to returns in the bond market. The ARS program generates bond-like returns that are uncorrelated with the bond market, consistent with the fact that the ARS program has a bond-like performance target: LIBOR + 500 basis points.

Exhibit 6 demonstrates the concept of market segmentation. CalPERS uses a long-duration subset of the Lehman Aggregate Bond index, an investment-grade bond index, to establish the fixed-income policy risk for the portfolio. This index includes U.S. Treasury bonds, investment-grade corporate bonds, and agency mortgage securities. It does not include high-yield bonds—they are outside the benchmark.

Below-investment-grade debt falls in between the benchmark boxes established as part of the CalPERS strategic asset allocation. Yet the investment staff of

EXHIBIT 4

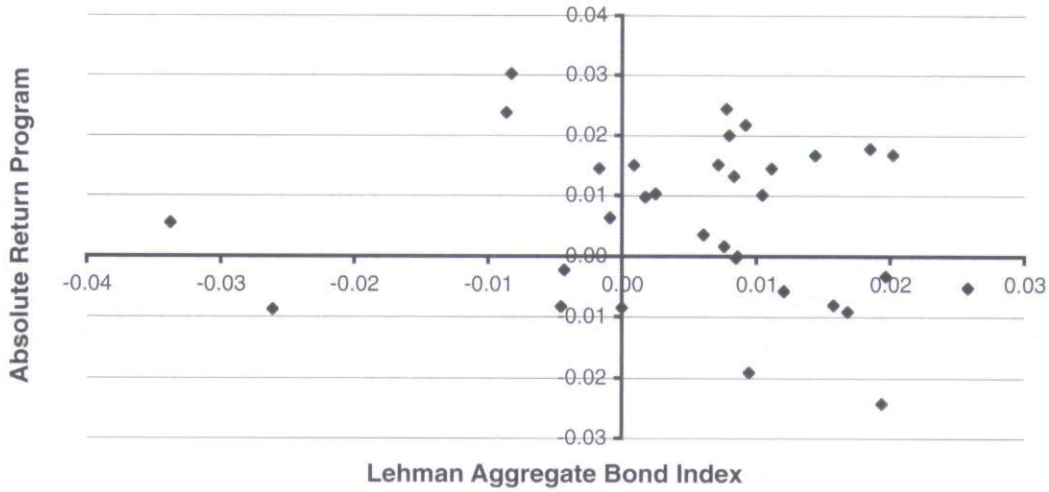
CalPERS Absolute Return Program versus S&P 500



Beta = 0.125 R-Square = 0.18

EXHIBIT 5

Absolute Return Program versus Lehman Aggregate



Beta = -0.12 R-Square = 0.013

CalPERS may invest in high-yield bonds as a tactical bet when they see opportunities to take credit risk. This is thinking outside the benchmark.

Exhibit 6 demonstrates that high-yield bonds have a less-than-perfect correlation with the Lehman Aggregate Bond index. With a beta of 0.71 and an R-squared of 0.68, there is still a large amount of CalPERS' fixed-income policy risk that is embedded within high-yield bonds. Exhibit 6 demonstrates, however, that there is a large gap in correlation that allows an investor to add tactical value to a portfolio benchmarked to the Lehman Aggregate Bond index.

In fact, the payoff structure of high-yield bonds resembles that of a call option—stable returns for most of the distribution, but much more of an ability to share in the up side of an improving economy than investment-grade bonds. This is because high-yield bonds react much more favorably to the reduced credit spreads that accompany the recovery of an economy as it moves from recession to expansion. In fact, high-yield bonds can be viewed as a call option on credit. Consequently, it is possible to consider high-yield bonds as part of the non-linear alpha drivers, much like convertible bond arbitrage (discussed below).

Exhibit 7 considers the third general alpha driver: concentrated portfolios. The example is CalPERS' corporate governance program. In this program, a concen-

EXHIBIT 6

High-Yield Returns versus Lehman Aggregate Bond Index

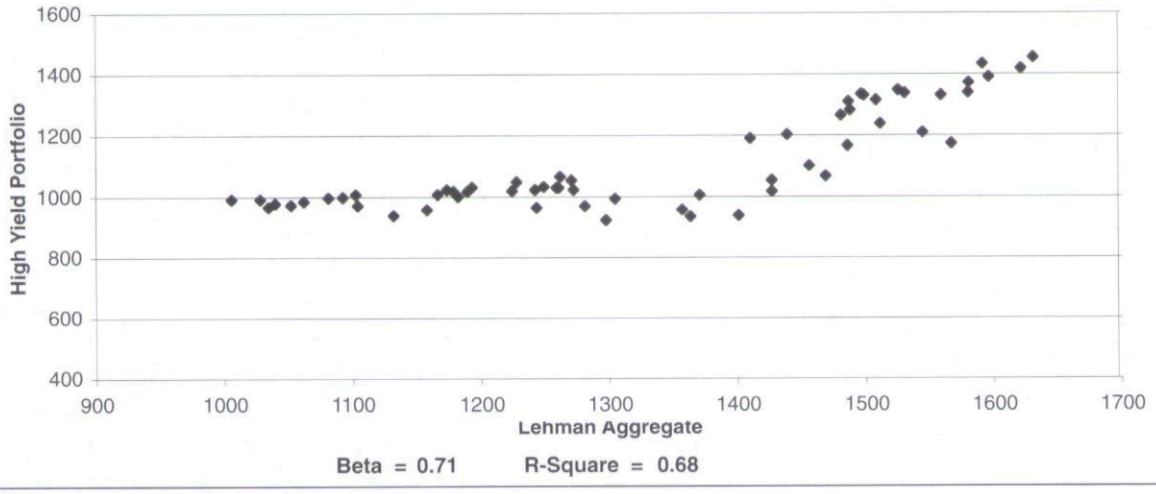
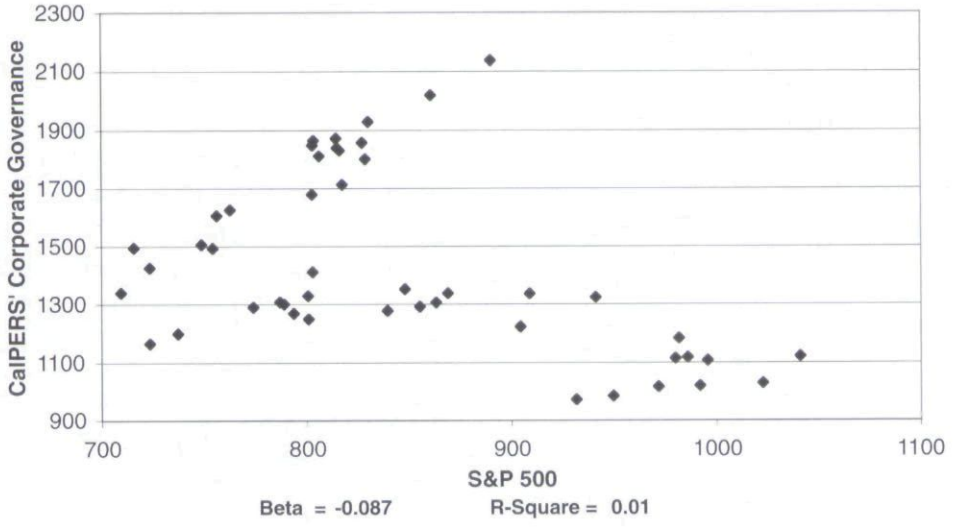


EXHIBIT 7

CalPERS Corporate Governance Program



trated portfolio is built with holdings in 10 to 15 stocks in public companies. A dialogue is established with the executive management of each company; better governance procedures are initiated; and operating performance is improved. Because of the small number of stocks in the portfolio, higher tracking error is expected (and allowed) compared to the broad stock market.

Interestingly, although this program invests in public companies, its returns remain uncorrelated with public stock market returns. The reason appears to be its long-term investment nature.

Corporate governance is not a quick fix; this is a program whose goal is to focus on long-term returns, not the ups and downs of the stock market. Returns are excellent. Over the past five years (the life of the program), the program has generated average annual returns of 16.9% compared to –2.3% for the S&P 500.

The last class of alpha drivers, convertible bonds, falls into the non-linear category. These are hybrid instruments combining elements of both stocks and bonds. Some institutional investors avoid these securities because of the difficulty in classifying them—are they equity or fixed-income? As a result, convertible bonds could be classified as a market segmentation alpha driver, akin to high-yield bonds.

We classify them according to their non-linear payoff structure, however. Each convertible bond includes an

EXHIBIT 8

Economic Analysis of Convertible Arbitrage

Economic Driver	Intercept	T-Bonds	S&P 500	SBHY	VIX	R-Square
Beta Measure	-0.70%	0.001	-0.0177	0.16	0.057	0.37
T-Statistic	-1.75	0.0277	-0.55	3.41	3.1	

embedded option to convert the bond into stock. This leads to a non-linear distribution of payoffs distinct from the linear beta drivers presented in Exhibit 1 and 2.

There are four economic drivers for convertible bonds:

- Interest rate exposure: Bond duration.
- Stock market risk: Convertible into the stock of the issuing company.
- Credit spreads: Often issued by below-investment-grade companies.
- Volatility: A key driver in the value of all options.

Exhibit 8 provides an analysis of the Hedge Fund Research, Inc., Convertible Arbitrage Index. This is an index of hedge fund managers that pursue convertible bond arbitrage as their primary investment strategy. Exhibit 8 regresses the returns to the HFRI Convertible Arbitrage Index against the four economic drivers of convertible bonds.

We see that the betas for Treasury bonds (interest rate exposure) and the S&P 500 (stock market risk) are virtually zero. The remaining two variables, the Salomon Brothers High Yield Index (credit risk) and the VIX (volatility index), demonstrate significant and positive coefficients.

Convertible arbitrage managers hedge away stock market and interest rate exposure, and focus on taking credit risk and being long volatility. Therefore, they generate value three ways: through credit spread compression; clipping large high-yield coupons; and being long volatility, which increases the value of the embedded call option in each convertible bond.

One could argue that credit exposure and long volatility can be replicated cheaply by investing with high-yield managers and purchasing options on the VIX stock market volatility index (or purchasing a volatility swap). Does this call into question the value of paying 2-and-20 hedge fund fees for this economic exposure? In fact, there is an active component to managing a long-gamma book—the volatility exposure—and this strategy can also enhance the non-linearity of the payoff structure.

Finally, the intercept of -0.70% per month, reflecting the security selection of convertible arbitrage managers, does not add any value, and the t-statistic is weakly significant at the 10% level.

The goal of alpha drivers overall is to generate excess returns for the portfolio, and not to incur policy risk for the institutional portfolio. In fact, the four alpha programs discussed demonstrate a distinct lack of concern for hugging a benchmark. As a result, significant active risk, or tracking error is expected.

Exhibit 9 compares the active risk of each alpha driver and the information ratio for each program to the stock market. The level of active risk is quite high compared to a traditional active manager, but this is precisely where a risk budget should be spent. Furthermore, each program generates a positive information ratio, demonstrating value added to the fund.[5]

RECOMMENDATIONS

We can characterize a number of recommendations.

Don't Worry About Style Classifications

Thinking outside the benchmark is a useful alpha-generating exercise, but it might meet with some resistance. In the asset management industry, consultants and institutional investors have long classified money managers into convenient style categories. The reasons are simple. Classification makes external manager searches easier (targeting a large-cap value manager search); it provides consistent style analysis (large-cap versus small-, growth versus value), and it allows for simpler recommendations (this manager outperforms its peer group of other large-cap managers).[6] Also, putting money managers into neat benchmark boxes makes hiring and firing decisions easier.

Investors should worry less about the style of a manager and more about whether the manager has sufficient skill to generate consistent alpha. Alpha need not be captive to beta. Find skill first, and then worry about the systematic risk that may be attached to that alpha.

EXHIBIT 9

Active Risk and Information Ratios

	Active Risk	Information Ratio
CalPERS ARS	14.20%	0.14
High-Yield	14.36%	0.62
Corporate Governance	14.47%	1.23
Convertible Arbitrage	16.55%	0.43

Calculate Your Alpha Weights and Beta Weights Separately

Active return must be unbundled from beta-driven products. There is no reason to pay active management fees for what is essentially a beta-driven product in Exhibit 1. Furthermore, the purchaser of an institutional investment product can isolate the alpha by stripping out the beta through the sale of futures or through exchange-traded funds. The key is to realize that every investment has some component of return that is derived systematically from the broad financial market and some portion of return that is not explained by market returns.

The efficiency gained by separating alpha and beta can be demonstrated by some simple mathematics. Kung and Pohlman [2005] show that the return to any investment may be defined in terms of alpha and beta:

$$r = \alpha + \beta$$

A portfolio return is then the sum of the weights of the investments times the returns associated with those assets:

$$R_p = \Sigma\, wr = \Sigma\, w(\alpha + \beta)$$

When the alpha and the beta portion of each asset are separated, the portfolio return becomes:

$$\Sigma\, wr = \Sigma\, w_\alpha \alpha + \Sigma\, w_\beta \beta$$

In the traditional portfolio, alpha and beta are purchased together where $w = w_\alpha = w_\beta$. When alpha and beta are purchased separately, the institutional investor doubles the number of weights that it may choose in its portfolio. Simply, more choices lead to greater efficiency.

Optimize Alpha the Same Way You Do Beta

Pension funds and other institutional investors often run optimizers—software programs designed to find the optimal mix of assets—at the strategic asset allocation level. This process often establishes an efficient frontier and leads to the percentage allocation among the major asset classes and commitments to the beta drivers.

Unfortunately, alpha drivers are rarely selected through an optimization analysis. Often they are added to an institutional portfolio on an ad hoc basis without a consideration of their complementary effects. Just as beta drivers provide diversification benefits through less-than-perfect correlation, portfolios of alpha drivers should be similarly constructed.

EXHIBIT 10
Correlation Analysis of Alpha Drivers

	ARS	*Corp. Gov.*	*High-Yield*	*Conv Arb*
ARS	1.00			
Corp. Gov.	0.34	1.00		
High-Yield	0.18	0.45	1.00	
Conv. Arb.	0.11	0.17	0.44	1.00

Exhibit 10 demonstrates that the four alpha programs are not at all correlated. Not only does each alpha driver provide a source of additional return to the portfolio, but it also does so in a diversified manner.[7]

Hedge funds, however, tend to have highly time-varying correlations, which can result in overall low estimates of correlation measured over long periods of time. Yet in times of financial market distress, particularly for hedge funds investing in less liquid securities and strategies, correlations can spike significantly. This happened during the liquidity crisis brought on by the Russian bond default and the Long-Term Capital Management meltdown in the late summer and early fall of 1998.

Construct Different Portfolios to Accomplish Different Goals

Rather than trying to satisfy both goal #1 and goal #2 through the selection of active managers, institutional investors should establish different portfolios to accomplish their different goals. Goal #1 can be satisfied through a cost-effective combination of beta drivers. Similarly, goal #2 can be satisfied through an efficient blend of alpha drivers.

In my oversimplified analysis, I defined only two goals for the investment staff. In reality, there can be many other goals, such as generating a sufficient annual cash flow to pay pension benefits or meet philanthropic donations. Consider this additional goal: Goal #3: Generate a 2% cash yield on the investment portfolio.

This goal is not about accumulating policy risk or adding extra value, but rather generating a high annual yield. Goal #3 can be accomplished by designing an efficient portfolio of cash flow drivers such as bonds, real estate, and high-dividend-yielding stocks.

The key point is first to identify the major goals of the institutional investor such as capital growth, excess return, or cash flow generation; then prioritize these

goals; and finally design a separate portfolio to accomplish each goal. There can be as many subportfolios as there are goals for the institutional investor. In fact, each subportfolio can then be optimized within the larger portfolio to find the most efficient blend of assets to achieve the multiple goals.

Make an Honest Assessment of Your Competitive Edge

It is not easy for an institutional investor to admit it has no information advantage in a particular market. Litterman [2004] notes that as markets become more efficient, investors will begin to recognize that they do not have a competitive edge that can be translated into added value.

When an institutional investor realizes it has no advantage in active management (or in selecting active managers), cost control becomes the most important value-added tool. Without an information edge, institutional funds should exit the active management arena and focus on reducing costs through indexing.

This also applies to institutional money managers. Those that build products for institutional portfolios should recognize their strengths and weaknesses. Where the institutional money manager has no information advantage, it should offer indexed and enhanced index products and reduce costs through economies of scale. Where an institutional money manager has a competitive edge, it can extract higher economic rents for its products, and greater resources can be committed.

Spend Your Alpha Budget Where You Have the Greatest Information Advantage

Most institutional investors would not consider corporate governance to be an alpha driver. Yet CalPERS has a competitive edge over other institutional investors in that it has developed a corporate governance expertise in the last 20 years. The insights gained from its program give CalPERS an information advantage over other investors that it has translated into significant added value. Not surprisingly, the CalPERS investment staff recently requested that the board of trustees allow them to increase their risk budget in this asset class.

As another example, the University of Texas Investment Management Company (UTIMCO—the management company for the University of Texas Endowment) has committed sizable amounts to oil and gas leases. The state of Texas is the leader in the United States in oil and gas development. Consequently, the UTIMCO investment staff have developed an information advantage in this investment market that they can exploit. Notably, UTIMCO has no investments in corporate governance, while CalPERS has no investments in oil and gas leases.

An investor should spend its alpha budget where it has the greatest ability to translate its competitive edge into added value. An information advantage can be developed in external manager selection, superior risk control, extensive knowledge about an asset class, better manager monitoring, or enhanced flexibility to practice tactical asset allocation.

A final thought is that perhaps institutional investors like CalPERS and UTIMCO could swap their alpha sources. This could be accomplished as an interfund total return swap.[8]

Avoid Peer Pressure

Peer pressure is often brought to bear by trustees who sometimes cannot resist looking to see if the grass is greener elsewhere. Unfortunately, peer comparisons are often drawn between two or more funds that do not have the same liability stream (pension funds), spending requirements (endowments), or donation schedules (foundations). While peer comparisons are tempting performance benchmarks, they ignore differences in funding, spending, or donating goals among funds.

Further, peer risk can be compounded by trustee unfamiliarity with alpha drivers or other alternative investments. This may cause an institutional portfolio to hug a peer group benchmark even if it causes a mismatch with the funding goals of the organization. Herding may reduce the risk of underperforming the peer group, but it increases the risk of not meeting the funding goals of the institutional investor.

SO WHAT'S THE CATCH?

The catch is that institutional investors face resource constraints. These constraints may be in the form of a small staff, limiting the number of asset classes that can be managed, limitations imposed by a board of trustees (e.g., no internal management, or prohibitions on investing in certain asset classes), or cash budget constraints. Therefore, the alpha budget must be spent efficiently.

Alpha and beta are not free; gaining exposure requires resources. While beta exposure comes relatively cheaply, alpha exposure can be quite expensive. 2-and-20

fees are the norm in private equity, real estate funds, absolute return strategies, and hedge funds. As a starting point, an institutional investor can assume that its beta costs are close to zero—passive market exposure costs only a few basis points, which can be recouped through securities lending.

Then you can optimize your alpha and beta portfolios simultaneously when only the alpha bets enter into the budget constraint. Applying a budget constraint ensures the most efficient portfolio.

ENDNOTES

This article benefited greatly from outside commentators. The author thanks Larry Pohlman and Edward Kung, the real experts on portable alpha; Eric Sorensen, the master of structured products; Andrew Weisman, who always keeps him honest; and Jeremy Armitage who corrected a number of errors and came up with some good ideas to boot. This work reflects the insights and opinions of the author and not necessarily his employer.

[1]Beta and R-squared calculations are based on return series, not the value of the indexes, to avoid any overstatement of the relationship that occurs from index values that can introduce similar autocorrelation properties.

[2]Nonetheless, it is interesting to note that the investment product in Exhibit 2 has several billions of dollars of assets under management. It is difficult to explain why this product continues to attract capital. Bull or bubble markets might blur the distinction between alpha and beta. Also, as long as there are new investors who want large-cap U.S. equity managers, a product like this can survive.

[3]Thanks to Eric Sorensen for pointing this out to me.

[4]Although the overall beta and R-squared measure show no relationship between CalPERS corporate governance program and the U.S. stock market, Exhibit 7 appears to demonstrate two different regimes: a positive slope for corporate governance between 1500 and 2200, but a flat relationship between 1200 and 1400. While we have no explanation for this dichotomy, it is something that bears further examination.

[5]Winkleman, Lax, and Bandourian [2004] provide a table of the median level of active risk for traditional asset managers.

[6]This recommendation was generated by the comments of Larry Pohlman.

[7]Although I confess to an ad hoc method of seeking alpha drivers.

[8]Thanks for this idea go to Jeremy Armitage.

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