Alpha and Beta – Translated from the Greek

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Asset Allocation

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The search for a postmodern theory of portfolio management continues, spurred on by a continuing expectation for a relatively lower return environment over the next ten years. Needing more return to achieve targets than is likely to be delivered by traditional approaches to asset allocation, an increasing number of plans are focusing on how much of their returns they should expect from beta and how much from alpha.

To those unfamiliar with the usage of these Greek letters in portfolio theory, this is a bewildering conversation. It's not improved when the term "portable alpha" is also introduced, because common usage rarely allows Greek letters to be thought of as being either portable or fixed in place. So, what is this conversation all about? To answer that question, it's worth dissecting just how these concepts are being used and what a plain English understanding of the debate can do to advance the search for a better expected return through portfolio construction.

Unalphabetically, let's begin with beta. In analyzing stock investing, this term is generally used to mean the tendency of an investment to move with the market. If a stock or portfolio has a beta of one, it is expected to be neither more nor less volatile than the market as a whole. If it has a beta of two, it is twice as volatile, meaning that every 1% change in the broad market should lead you to expect a 2% change in the subject stock or portfolio over time.

In the current discussions about alpha and beta portfolios, this meaning has been transmuted. Beta has become a synonym for market movement or exposure. Thus, getting return from beta in a portfolio construction context means getting return from being exposed to the market. It is being contrasted with alpha, which means, in this context, the earning of return by beating the market.

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Now while this all seems pleasantly esoteric, the subtly new meanings of these terms are actually quite useful. They make it easier to talk about a number of important principles that underlie Modern Portfolio Theory (MPT) and can help clarify the debate over the appropriate ingredients for a Postmodern Portfolio Theory (PMPT?).

Virtually everyone involved in institutional investing has pondered charts showing that the long run experience of investing in different asset classes is surprisingly predictable. Equities reliably deliver returns in excess of inflation, or real returns, of about 5%. Long-term bonds produce somewhat less, maybe 1% or 2%. Cash provides a return equivalent to inflation, or a zero real return. Real estate tends to produce a real return between stocks and bonds. Each of these is an asset class with a long-run return that is highly predictable, especially relative to each other.

While the absolute relative returns may vary in different eras, a ten year or at most a twenty year period is all we usually need to look at to see the familiar ranking of returns emerge – equities first, real estate next, then bonds, then cash. It's not a random return. It's one that is driven by the risk and return tolerances built into the capital markets for each kind of instrument, calculable in accordance with the capital asset pricing model (CAPM). It's predictable over the long term because it is enforced by arbitrage – if the return gets out of line, capital flows so as to push it back in line.

Now think about this characteristic another way, using our Greek terminology. We can say that asset classes priced by CAPM have beta, or expected return. Take it one step further, and we can usefully settle an old debate about the proper definition of an asset class – it is a class of investments that has similar beta characteristics. So, when an asset class has a long-run, predictable return because of the arbitrage in CAPM, it is a source of beta.

In this usage, everyone must keep in mind that alpha and beta are two very different sources of return. In beta investing, everyone can win, and the asset class can reward all investors as it earns the return on capital that CAPM demands. In alpha investing, every gain is someone else's loss, as there is no alpha in the returns for the total asset class. Consequently, success in alpha investing requires a different kind of skill and a different tolerance for risk than beta investing.

Essentially, what the enthusiasts for a postmodern portfolio theory are saying is that there are not enough returns from beta and that investors need alpha to get to their target returns. Or, more subtly and usefully, investors should decide how much of their expected return they want to come from beta (just by having exposure to asset classes whose returns are predictable) and how much they want to come from alpha, which results from picking managers who will earn better returns than the broad asset classes.

Finally, many people bring these two points together. The fundamental insight of MPT is that uncorrelated sources of return make for a better total risk-adjusted return. If there is not enough in the way of uncorrelated beta sources, the argument goes, add a search for uncorrelated sources of alpha. Instead of analyzing what mix of asset classes (read: beta sources) will achieve your objective, consider analyzing your mix of alphas to maximize their expected returns and minimize their correlation.

This line of thought has led to increased allocations to hedge funds and other vehicles that analysis suggests will add value and do so in ways that are uncorrelated with each other. It has also led to increased debate about whether traditional active managers are good sources of alpha and whether beta exposure is best achieved by use of index funds and derivatives, due to their lower cost.

It is clear enough that the returns from traditional asset classes are likely (not certain, but likely) to be disappointing for the next ten years relative to history. But it is less clear that all of the ideas that are being suggested as solutions will really solve the problem. To the extent they do offer a solution, it is even less clear that these ideas are appropriate for everyone. Let's start with the hottest sector at the moment, hedge funds.

Our new terminology now allows us to say with more clarity than ever before that hedge funds are not an asset class, because they have no beta as we are now using the term. They do not finance a portion of the capital structure of the economy and have no CAPM discipline that forces their return into long-run equilibrium with the asset classes. Instead, they are invested in multiple strategies, each of which is an effort either to exploit an arbitrage opportunity or to beat the market through significant bets against it. So, the question becomes, how much alpha do hedge funds generate and how likely are investors to be able to predict which of them will generate it?

Recent research from Ibbotson Associates and Dr. Burton Malkiel separately suggests that the amount of alpha is a lot less than one would guess from looking at the widely marketed indexes of hedge fund performance. Backfill and survivor bias may lead to an overstatement of returns in these indexes by about 50%. They appear to be good indexes of the successful hedge funds rather than the available opportunity set. In addition, Malkiel's research reveals the highly important point that there is little or no persistency of returns, that managers who are above median in one period are just as likely to be below median in the next.

So, what is the appeal of hedge funds? Their appeal is grounded in the promise that they are a potential source of uncorrelated alpha. For that to be right, they need to have alpha and to be able to create it consistently over time. There may be a way to achieve this through manager diversification and skillful selection of hedge funds. However, two other sources of excess return are more likely to produce excess returns for managers.

The first of these is the old-fashioned "long-only" manager. While many regard the hunt for return from "active management" as difficult, there is no question that a lot of data is available to help find managers who can generate alpha over a meaningfully long investment horizon. In essence, taking advantage of this approach is the concept of so-called "portable alpha." Find a manager who adds value relative to a liquid benchmark, hire that manager, short the benchmark using a derivative, and the excess return is "pure" alpha and can be "ported" into an alpha-generating portion of the portfolio without affecting your beta exposure.

The relative size of the alpha and beta portions of your portfolio will be driven by your degree of confidence in your ability to identify managers who will generate value – the more confidence you have, the more you should use exposure to alpha to generate your target returns. The good news about using long-only managers to achieve alpha is that fees are no different than traditional public market investment management, rather than the higher schedules demanded by hedge fund managers. The bad news is, of course, that many are skeptical about the feasibility of identifying such managers in efficient, liquid public markets.

That skepticism in turn should lead to consideration of other asset classes that have gotten relatively less attention. Private asset classes ought to be receiving more attention as a consequence of this way of thinking because they are a source of both alpha and beta. Private markets generally are characterized by greater spreads between top and bottom quartile performance than public markets and by much greater persistency of returns among managers than, say, hedge funds. For example, the best managers of private equity add more value than the best managers of public equity, and they are much more likely to continue to do so over time than their public market or hedge fund counterparts. As a consequence of this well-recognized fact, bidding for participation in the offerings of top-tier private equity markets is highly competitive. What this means, in our new parlance, is that there is more opportunity to find alpha in private markets than in public markets.

But private markets are also important sources of beta. There are a number of private asset classes (read: beta sources) for which an explicit allocation would be a source of uncorrelated incremental returns. Private mortgages are a glaring example. Private placement bonds are another. Real estate equity is another. Because these asset classes are difficult to benchmark and measure, many institutional investors have a deep bias against them. But portfolio construction is supposed to be about finding uncorrelated sources of return, not just doing what is easy.

In fact, this idea of focusing on multiplying the number of beta sources rather than alpha sources is applicable to public markets as well. Many institutional investors already do this when they explicitly allocate a portion of their equity to overseas markets. It also underlies the explicit allocations many have to large, mid and small cap equity managers. But the idea can be carried further, so long as there is good reason to expect the allocation to have some diversification benefit. Why not an explicit allocation to REITs, for example? Or corporate bonds instead of just a Lehman aggregate fixed income portfolio? In short, the greater the number of uncorrelated asset classes and the more resulting uncorrelated beta, the better. MPT never suggested anything else.

As for how to implement a postmodern portfolio theory approach to portfolio construction, the alpha versus beta discussion is highly promising. For example, portfolios reaching for return, with a high degree of confidence in their manager selection capabilities, should make alpha bets, particularly among managers of private asset classes where persistency of performance is demonstrable. On the other hand, highly conservative portfolios with limited resources to research managers effectively may find it best to stick to an all-beta approach to generating returns. In short, beta diversification is the most accessible source of uncorrelated returns for those who confine their investing to public market assets, while alpha and beta can both be sources for those with the resources, scale and aptitude for private market investing.

It is helpful to think about alpha and beta “budgets” consciously and explicitly in this way, if for no other reason than to force greater clarity in thinking about the nature of risk in each proposed investment. For example, commodity strategies are almost surely an alpha bet because no capital market discipline assures that they will grow in value in the aggregate – in fact, there is some evidence that they tend to lose value relative to financial assets over long time horizons. Hence, investing in commodities should be weighed against alpha alternatives in the context of a decision about how much alpha a plan wants to aim for.

In short, whether we have a postmodern theory of portfolio management or not, the clarity that careful use of the concepts of alpha and beta adds to the portfolio construction process is a good thing in many ways. Its development and elaboration are sure to be an intellectual highlight of the portfolio construction debate for some time to come.

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