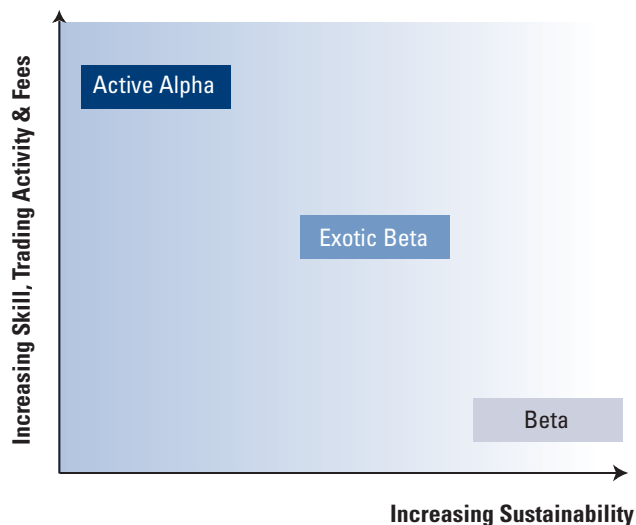




Beyond Active Alpha

Alpha is hard to come by. Every day, investors scour the markets searching for the road less traveled, hoping to capitalize on inefficiencies before other market participants can do the same. But, what if you could generate alpha from more sources than conventionally thought? In fact, returns exist along a continuum – from beta, to exotic beta and ultimately, to alpha. By optimizing this spectrum of return sources, investors can achieve a more efficient portfolio.

Portfolios Should Contain the Complete Spectrum of Return Sources



To begin our discussion, the term “exotic beta” should be added to the investment lexicon to supplement “beta” and “alpha.” In my view, beta is exposure to the global market portfolio. And, any positive expected return from exposure to a risk uncorrelated with this portfolio is alpha.

Market convention, however, is to call the exposure to any *asset class or risk factor*, not just the market portfolio, a beta. In deference to this convention, we will follow a growing trend to refer to an exposure to a risk factor that is both uncorrelated with global markets and has a positive expected return – such as commodities – as “exotic beta.”¹ The adjective “exotic” distinguishes it from market beta, the only beta which deserves to get paid a risk premium. The excess return from an exotic beta is alpha, and therefore, *exotic betas should be included as a source of alpha in a portfolio.*

If exotic beta is alpha, why bother to distinguish between them? The main reason is that exotic beta has more attractive characteristics – its lower turnover allows for higher capacity, longer sustainability and lower management fees.

The Starting Point – Fischer Black and the Capital Asset Pricing Model (CAPM)

Make no mistake, this idea is hardly new. In fact, in 1969, Fischer, along with Michael Jensen and Myron Scholes, documented that low-beta stocks seemed to be providing too high a return, relative to high beta stocks, to be consistent with the CAPM. One interpretation of this finding is simply that the model must be flawed.

Fischer had a different point of view. He agreed that this empirical regularity was an anomaly, perhaps one caused by the no-short constraint. In any case, it would have to go away over time because, if it persisted, investors could profit from it. How? The answer is incredibly simple. Suppose, for example, you held a portfolio that, all else equal, tilted toward low-beta stocks. Such a portfolio would have lower beta than an equal dollar investment in the market portfolio, but a higher return per unit of beta. So, on average, it would

¹ More precisely, an exotic beta is any risk factor that still provides a positive expected return after any market beta risk has been hedged away.

outperform the returns of a smaller investment in the market portfolio sized to have equal beta. If we subtract the latter from the former, we have a zero-beta portfolio with positive expected return, i.e., pure alpha, which is highly valuable. And, investors will seek to capture pure alpha as long as the opportunity continues.

Similarly, there are other deviations from equilibrium that provide opportunities for investors today. One of them is sourcing a spectrum of return sources – alpha, exotic beta and beta – in a portfolio. When we describe “*Active Alpha Investing*” as the separation of alpha from beta, we are implicitly adopting the CAPM framework with a single beta – or more specifically, the global market portfolio beta.

Today, investors adopt a more general framework, one implicitly consistent with a multiple beta approach. They allocate weights to different asset classes and often refer to multiple betas, one for each asset class. In this context, each “beta” refers to a separate risk factor exposure that is expected to provide a return. Unlike the CAPM context where there is only one beta, in this approach, returns are potentially available from multiple risk factors.

A world with multiple uncorrelated return factors can provide opportunities to both create alpha and outperform the market portfolio. Above, we described how to take advantage of low-beta stocks. Similarly, one can take advantage of multiple betas. Let’s explain how.

Suppose sources of risk that are uncorrelated with the global market portfolio and also provide positive excess returns exist. For example, investors can readily obtain exposure to hurricane risk by buying catastrophe-insurance-linked bonds. Historically, the risk of paying for hurricane damage has been uncorrelated with the market return and is likely to remain so. Yet, investors have traditionally charged a significant premium to compensate for taking exposure to catastrophe risk. Of course, we could be wrong, but we would expect the returns on hurricane risk to remain positive going forward, despite the CAPM equilibrium.

In a CAPM equilibrium, however, exotic beta should not persist. Sources of return that are uncorrelated with the market are very attractive. Just as with low-beta stocks, investors will continue to increase their exposures to these risks until the expected excess returns going forward are

driven down to unattractive levels – restoring Fischer’s CAPM equilibrium after all.

Ultimately, we agree with Fischer that this equilibrium will eventually take place. However, unlike Fischer suggested, we think that it is likely to take many years for it to be reached. In the meantime, investors can benefit as the prices of the assets they hold get bid up.

The Complete Spectrum: Beta, Exotic Beta and Alpha

Combining traditional beta with alpha from active management and relatively passive exposures to exotic betas can result in a more efficient portfolio. Returns from exotic betas and other sources of alpha are different – most notably, alpha requires a higher degree of active management. Let’s evaluate the merits of each as a source of return:

1) Beta: Basic Market Exposure

Because exposure to developed equity markets can be obtained today by passively holding an index portfolio, traditional beta generates little cost in terms of fees, transaction costs or taxes. So, it makes sense for investors to include some beta as a return source in their portfolios. However, it should be complemented, and diversified, with other beta exposures and with active management strategies.

2) Exotic Beta: A Source of Alpha

The appeal of exotic betas, when they exist, are clear. Most notably, being relatively passive strategies, they are cheap to implement. Transaction costs, liquidity requirements and management fees should be minimal, and capacity should be quite large. Since the returns are uncorrelated with those of the market, a modest exposure to an exotic beta should have minimal impact on the overall risk of most investors’ portfolios.

If the existence of exotic betas sounds too good to be true, it is. As we said earlier, exotic beta as a source of return shouldn’t persist because it is not an equilibrium phenomenon. We can’t depend on it forever. For example, although commodities are uncorrelated with equities and positive excess returns from commodities have been available for many decades, it’s likely that this premium will decline over time. This will happen as commodity prices are bid up to equilibrium levels by investors trying to capture this exotic beta premium.

Why does exotic beta exist? In order for investors to prepare for the alpha embedded in exotic betas to go away, they need an explanation of why it exists in the first place. The best explanation is behavioral – most investors do not behave as they should. In equilibrium, a risk premium should only be paid for “covariance with the market.” For commodities, this covariance is zero; thus, no premium deserves to be paid. There is, however, a common perception that individual asset “volatility” measures the probability of losing money and, therefore, requires compensation. This risk premium for volatility exposure is the primary source of the return in exotic betas.

Another source of return in exotic betas is demand for liquidity. Some have argued, for example, that much of the historical return from exposure to commodities, and particularly commodity futures, comes from providing liquidity to hedgers.

A third reason for the existence of returns from exotic beta is that the global market returns have fat tails on the downside, and investors are getting paid a premium to accept the risk of a market crash, which is concentrated in certain exotic betas. Exposure to default risk is an example of where this might be the case. Such a crash risk premium probably does exist today, but it does not seem likely to be large enough to provide the full explanation for the historical positive returns from exotic betas.

A final explanation comes from leverage. Some have argued that leverage creates the value in exotic betas, rather than expected returns inconsistent with equilibrium. This argument is misleading. Leverage is helpful if it relaxes a constraint that otherwise prevents a portfolio from achieving a desired set of risk allocations, but leverage doesn't *create* the opportunity. Opportunities exist only if the positive expected excess return is inconsistent with equilibrium. In these cases, leverage can be used to increase the overall risk and return for a given level of capital, but the opportunity remains the same, whether levered or not.

We have focused on commodities and catastrophe insurance as two potential sources of exotic beta, but there are many others. While certainly not an exhaustive list, other sources of exotic betas might include selling volatility in various markets, taking exposure to corporate default risk, investing

in corporate mergers and acquisitions, and tilting toward stocks with characteristics such as value or small capitalization.

It is important to note, however, that sourcing exotic beta is never completely passive, and thus, in many cases it is not obvious whether a strategy is considered alpha or exotic beta. For example, creating an exposure to commodities is a relatively passive strategy which can be efficiently implemented in the derivatives markets. Some trading, however, such as rolling futures contracts, is nonetheless required. Another example is buying bonds with coupons linked to catastrophe insurance. This is also a relatively passive strategy, simply requiring new purchases over time. Other exotic betas we mentioned require more frequent trading and, consequently, might be viewed as pure alpha.

3) Alpha: The Ultimate Return Source

We have used the term “Active Alpha” to refer to returns derived from skilled active management of risks that are uncorrelated with the market. Such skills are the primary focus of active portfolio managers. Whether it is a traditional manager who uses fundamental analysis to pick stocks to outperform a benchmark, or a quantitative team that employs a disciplined approach to exploit security-specific anomalies in any asset class, active management fees are earned by creating return from risks uncorrelated with the market.

Issues related to the successful employment of “*Active Alpha Investing*” were explored in a series of articles previously published as “The 5 C's”: Correlation, Consistency, Capacity, Capital and Cost. These and other discussions are available at <http://activealpha.gs.com>.

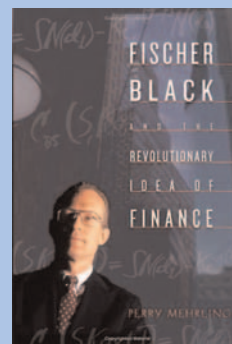
A Road Less Traveled

Of course we recognize, as Fischer did many decades ago, that the actions of investors trying to create profits will probably drive the market even closer to equilibrium. Undoubtedly, in the years ahead, it will become even more difficult to outperform the passive market portfolio. It will take not only skill, but also creativity and diversification to meet return expectations. And, quite simply, combining traditional beta, exotic betas, and alpha from active management may be a more efficient way to travel that road.

Fischer Black's View of the World

While Fischer Black is best known as the co-author of the Black-Scholes option pricing formula, his primary professional focus (he was the first head of Goldman Sachs Asset Management's quantitative team) was the Capital Asset Pricing Model (CAPM). For Fischer, the CAPM was fundamental to thinking about risk and return. His view was that risk, being a limited resource, should be taken if the risk taker gets paid. That said, the key insight of the CAPM is remarkably simple: in equilibrium, the return that investors should receive for any risk taken is proportional to its beta, or its covariance with the market. This simple idea, that a risk premium is a function of covariance not variance, is amazingly powerful. To Fischer, the CAPM defined a center of gravity toward which the world would eventually move.

For a biography of Fischer and a simple introduction to his ideas and influence in the asset management industry, we recommend Perry Mehrling's new book, "Fischer Black and the Revolutionary Idea of Finance."



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