Fama/French Forum

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Long/Short Strategies

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Long/Short (LS) strategies buy one equity portfolio and short another. They are often sold as a way to add a premium with special diversification benefits that arise because the premium is not highly correlated with the rest of an investor's equity portfolio. We provide examples to show how to evaluate these claims.

Example 1 -- Suppose an investor holds the market portfolio. An LS manager offers to provide a value premium uncorrelated with the market. To keep things simple, suppose shorting involves no transaction costs and can be done with full use of the proceeds; that is, there is no collateral. The LS manager provides the promised value premium by shorting the market and using the proceeds to buy a value portfolio that, like the market portfolio, has a market beta equal to 1.0. The LS strategy thus generates a value premium uncorrelated with the market return the investor holds long. To keep things really simple, suppose the long and short positions of the LS manager are equal in size to the investor's long position in the market portfolio.

In this example, adding the LS strategy to the investor's market portfolio is a roundabout way to get the investor to hold a simple value portfolio. If V is the return on the value portfolio, and M is the return on the market portfolio, the LS strategy produces V – M. Since the investor gets M from his long position in the market portfolio, his total return is M + V – M = V, the return on the value portfolio.

In a world without fees and expenses, it doesn't matter whether an investor buys a value portfolio directly or constructs it indirectly with a long position in the market and an LS position that is long the value portfolio and short the market. In the real world, there are fees and expenses at every step, and if the ultimate goal is to hold a specific value portfolio, it is almost surely less costly to buy it directly from a low fee manager than via the three-step approach of the LS strategy (that is, long the market on personal account, then short the market and long the value portfolio via the LS manager). Moreover, the direct purchase approach certainly makes it easier for financial advisors and institutional managers to explain performance to clients and boards.

The example above is chosen so the effect of the LS strategy on the investor's portfolio is transparent. The general point, valid in this and any other example we can imagine, is that LS strategies, indeed all strategies, should be evaluated on what they imply for the ultimate holdings in an investor's portfolio and on the costs they impose on the investor. The second example illustrates further.

Example 2 – In Example 1, the investor puts no money into the LS strategy. The LS strategy pays off when the return on the value portfolio is greater than the return on the market (V > M), but when V < M the investor must make up the shortfall by selling part of his long position in the market portfolio. In the real world the LS manager is likely to require an up front investment to cover potential shortfalls. To keep things simple, assume the required investment is equal to the value of the long position in the Long/Short strategy. To maintain the strategy's zero correlation with the market, the LS manager puts the required investment into a fixed income portfolio uncorrelated with the market portfolio of stocks.

Suppose the investor leaves half his wealth in the market portfolio and invests the other half in the LS strategy. If F is the return per dollar invested in the fixed income portfolio, the investor's overall portfolio return is 0.5F + 0.5V – 0.5M from the LS strategy and 0.5M from his position in the market portfolio. The overall portfolio return is thus (0.5F + 0.5V – 0.5M) + 0.5M = 0.5F + 0.5V. In other words, with the LS strategy, the investor ends up with a 50/50 portfolio of fixed income and the value portfolio. If this 50/50 portfolio is the goal, the fees and expenses incurred to invest in it directly are almost certainly lower than the costs for the indirect four-step LS approach.

To make the analysis transparent, in Examples 1 and 2 the short position in the LS strategy is in the same (market) portfolio as the long position outside the LA strategy. In the real world, the two portfolios are unlikely to be an exact match. Even without an exact match, however, the short equity position in the LS strategy offsets equity exposure elsewhere in the investor's portfolio.

Circling back to the beginning, LS strategies are often sold as a way to achieve tilts with a diversification benefit. The purported source of the diversification benefit is the low correlation between LS returns and the equity portion of an investor's portfolio. The low correlation is achieved by simultaneously holding long and short equity portfolios, or derivatives that have the same effect. But the end result is just an overall portfolio with different style tilts and no special diversification benefit. And the indirect approach of LS strategies is likely to be a costly way to get the tilts.

We end with a final statement of our general point. LS strategies, indeed all strategies, should be judged by their impact on an investor's overall holdings and overall costs.

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