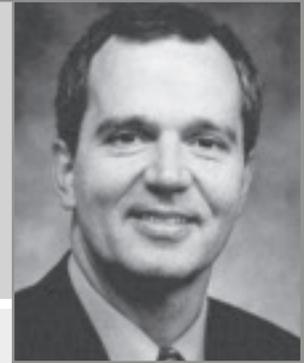


SURPRISING MOMENTS IN HEDGE FUNDS



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Compared to equities, they aren't as risky as you think.

The general perception among most investors is that hedge funds are very risky with a high potential for substantial losses. A number of researchers have reported that, while hedge funds look superior from a mean-variance perspective, there is a high potential for large losses (or extreme event risk) because of the negative skew and high kurtosis of hedge fund return distributions.

In a recent working paper (2005), Todd Brulhart, KCS Fund Strategies Inc., and I presented evidence that contradicts this view. We found that the skew and kurtosis in hedge fund returns do not necessarily imply that investors are exposed to undue risks. If one looks directly at the histograms for hedge fund indexes and compares them to equity indexes, it is immediately apparent that the hedge fund indexes do not have extreme returns (either positive or negative) that are as severe as for equity indexes. An analysis of maximum drawdowns also shows that those of hedge funds tend to be less severe and with much shorter recovery times than they are for equities.

We also question the usefulness of the standard measures of skew and kurtosis that are scaled by the standard deviation.

We note investment theory uses unscaled third and fourth moments rather than the standard measurements of skew and kurtosis and that unscaled third and fourth moments also support the conclusion that the risk of extreme returns is more prevalent in equity indexes than in hedge fund indexes. It appears as though the use of skew and kurtosis leads to the wrong conclusions.

Finally, Brulhart and I extend the work of Ingersoll (1987) to develop a way to use leverage to equalize the risk of extreme events of various investments in order to demonstrate that one investment can clearly dominate another when the effect of higher moments

has been accounted for. Our research shows that, when the unscaled fourth moments have been equalized through the use of leverage, hedge funds would still be preferred over equities.

In conclusion, there are several implications for investors that our results highlight. First, the large allocations that some investors have made to hedge funds have been justified. Based on the historical data, these investors have enjoyed higher returns without taking on undue risk. Second, the use of leverage on a portfolio of hedge funds, as is often done by funds of hedge funds, may also be appropriate. Third, although the risk of a large loss on a single hedge fund may be similar to the risk of a large loss on a single common stock, this is a diversifiable risk as can be seen in the low historical incidence of large losses in the diversified hedge fund indexes. Finally, investors should be careful with the traditional portfolio management tools they use in ana-

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lyzing hedge funds. Applying mean-variance tools to hedge funds can expose investors to risks in the higher moments that they are not aware of. In addition, using the standard measures of skew and kurtosis is not consistent with academic theory and can lead to erroneous results. ■

References

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