EDITOR'S CORNER

Why Hedge Funds?

Stephen J. Brown

The hedge fund industry is in a state of crisis. Many news outlets are reporting substantial redemptions. Bloomberg recently reported that investors pulled an estimated $25.2 billion out of hedge funds in July 2016, the largest withdrawal since the global financial crisis.[1] The reason is not hard to find. From January 2009 through March 2016, the S&P 500 Index earned an annualized total return of 14.5%, whereas both the broad-based HFRI Asset Weighted Composite Index and the Dow Jones Credit Suisse Hedge Fund Index (an asset-weighted index) recorded an annualized after-fee return of only 6.1%. Disappointing hedge fund returns, combined with high fees and transparency issues, were widely cited as possible reasons for the September 2014 decision by the California Public Employees' Retirement System (CalPERS) to withdraw $4 billion from the hedge fund sector. Although CalPERS said at the time that its decision was not related to performance issues, citing instead the complexity and costs of the investment program, the annualized 10-year return of only 4.8% was less than its target return of 7.5%.[2] This decision was especially significant for many smaller public pension funds. Indeed, for many institutional investors, CalPERS's decision in April 2002 to invest in hedge funds greenlighted their entry into this sector.

Many in the hedge fund industry defend the sector's relatively poor performance, arguing that diversified hedge fund strategies are actually low-volatility investments. From January 2009 through March 2016, the annualized standard deviation of the return on the HFRI Asset Weighted Composite Index was only 4.3%, compared with 14.6% for an investment in the S&P 500, with a Sharpe ratio 37% higher than that of a passive S&P 500 investment. This result is not unique to this HFRI index. The Dow Jones Credit Suisse Hedge Fund Index posted a Sharpe ratio 31% higher than that of the market over the same period (after the financial crisis), and both indexes recorded a statistically significant alpha measured with respect to either the market or the five factor benchmarks from Kenneth French's website. Despite concerns about a rising correlation between hedge funds and the equity markets, the correlation between the HFRI index and the S&P 500 has been relatively stable since the financial crisis (on a rolling 24-month basis), and the beta of the HFRI index over the period is only 0.21. Thus, it is not surprising that the hedge fund sector should trail this benchmark over a period when the S&P 500 has done particularly well. Appropriately adjusting for risk, hedge funds actually outperformed the market. A strategy of investing 0.21 of an asset portfolio in an S&P 500 Index fund and the remainder in a rolling portfolio of Treasury bills would have generated (without rebalancing) approximately the same return volatility as the hedge fund sector but would have underperformed hedge funds by 1.8% on an annualized basis.

The high-return/low-volatility attributes of hedge fund strategies are not a recent phenomenon. The Dow Jones Credit Suisse index goes back as far as 1994. The story is the same. From January 1994 through March 2016, hedge funds experienced lower returns than the S&P 500 but with considerably lower volatility, a high Sharpe ratio, positive and significant alphas, and a low beta. The market did not do so well in the period leading up to and through the financial crisis; from 1994 to the end of 2008, the low beta of hedge funds implied that they outperformed the market by 2.3% on an annualized basis and after fees and expenses. In remarks before the US House Financial Services Committee on 13 March 2007, George Hall, representing the Managed Funds Association, said, "In terms of investments in hedge funds, if we look at the pension market…I think the reality is that common equities in most cases may be more risky than the overall hedge fund market."[3] If we follow this argument to its logical conclusion, we find that institutional investors should be increasing their allocation to the hedge fund sector, not withdrawing from it altogether.

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Why then are institutions withdrawing from this sector?

The first point is that we should be very careful in how we interpret broad-scale hedge fund indexes. The term "hedge fund" does not imply a homogeneous asset class but, rather, describes the way in which the fund is organized. Hedge funds include many disparate investment strategies. The first hedge funds were organized in the United States as limited investment partnerships that were exempt from registration under the US Investment Company Act of 1940.[4] In return for restrictions on both the number and the qualifications of investors, these hedge funds were not subject to the same SEC regulations and reporting requirements as public funds. Hedge funds that were subsequently organized in Europe and elsewhere operate in different regulatory environments but, like those in the United States, are not significantly restricted in terms of the investment strategies they may use. The first private fund in the United States to take advantage of the exemption from registration was established by A.W. Jones. In 1966, Carol Loomis described the long–short investment strategy of A.W. Jones as a "hedge."[5] The name stuck, even though only a minority of funds that enjoy the exemption are hedged in any meaningful sense of the word.

There has been a wide disparity of performance across various hedge funds. In research that Will Goetzmann and I published a while ago and have recently updated, we found that over 20% of the cross-sectional dispersion of annual hedge fund returns can be attributed to the strategy style alone.[6] Investors need to be very careful; not all hedge fund strategies are the same. Although hedge fund strategies differ, leading to different investment outcomes, many hedge fund strategies share a common characteristic: earning rents from the provision of liquidity to the markets. Not surprisingly, many of these funds did poorly when investors ran for the exits during the recent financial crisis.

The idea that hedge funds are a low-risk alternative runs counter to the perception that hedge fund managers are high-octane risk takers. This apparent conflict is resolved once we understand that the HFRI index and other hedge fund indexes represent broadly diversified pools of hedge funds. They should not be thought of as representing the experience of any particular fund. Individual hedge funds are far more risky than any index representing this sector of the market. To achieve the favorable risk–return attributes reported for hedge funds, investors must consider diversifying into at least 10 hedge funds. Although hedge funds play a role in an otherwise well-diversified investment fund, investors should never put the bulk of their assets into a single hedge fund.

The imperative to diversify hedge fund positions was a major factor in the popularization of funds of hedge funds among institutional investors. Hedge fund diversification can be an expensive proposition. According to the most recent Lipper Hedge Fund Database (TASS), a typical US dollar–denominated hedge fund requires a minimum investment of half a million dollars. Funds of hedge funds, with a much smaller minimum investment requirement, provide access to diversified hedge fund portfolios. Moreover, given the general lack of transparency and limited reporting requirements in the hedge fund sector, these funds allow investors to delegate their operational due diligence responsibilities to the fund manager—for a fee. But these funds are not without risk. The global financial crisis (January 2008–May 2009) was a difficult time for many hedge funds: A little over 15% of US dollar–denominated hedge funds ceased reporting their results to the TASS database; in contrast, 20% of funds of hedge funds ceased reporting. Hedge funds can stop reporting for many reasons. For example, a fund that is closed to new investors may see no reason to voluntarily report results to hedge fund consultants. The financial crisis was a very stressful period when many funds ceased operating—funds that had represented themselves as hedged against adverse market outcomes. This situation was particularly unfortunate for those managers of funds of hedge funds who had argued that diversification among hedge fund strategies would limit financial risk.

Part of the problem was that institutional investors did not understand that diversification by itself is no protection against hedge fund tail risk—a component of financial risk not captured by the standard measure of volatility that enters into the Sharpe ratio calculation. Indeed, for this reason, many hedge fund analysts eschew the use of the Sharpe ratio in this context. Naive diversification (allocating funds equally among randomly chosen hedge funds) can decrease the volatility of month-to-month returns by a factor of 2, with professionally managed diversified hedge fund strategies further reducing volatility by half as much again.[7] However, tail risk increases as funds are added to the portfolio. The reason is that although hedge fund strategies are quite diverse, many of them earn rents from the provision of liquidity to the markets, which means that in a liquidity crisis, their returns become highly correlated. Hedge funds all fell down together in the course of the financial crisis, but tail risk exposure was evident before the crisis.[8] The evidence shows, however, that professionally managed funds of hedge funds exhibit even higher levels of tail risk than a naively diversified strategy. Why?

In a paper published the same week as the Bernie Madoff disclosures, Thomas Fraser, Bing Liang, and I argued that, far from being a cost center, operational due diligence is a source of alpha in a diversified hedge fund strategy.[9] Many hedge funds provide limited disclosure and use relatively obscure trading strategies. As a result, appropriate due diligence can contribute up to 2.6% to the annual return of a diversified hedge fund strategy by excluding funds likely to fail. We found that only the larger funds of hedge funds, which can afford to perform the necessary due diligence, achieved a favorable after-fee return per unit risk. In other research, Will Goetzmann, Bing Liang, Christopher Schwarz, and I found that evidence of operational risk in standard operational due diligence is associated with significantly lower fund returns and an increased risk of fund failure.[10] However, it appears that evidence of operational risk exposure in no way mediates the naive tendency of hedge fund investors to chase past high returns.

Operational due diligence is an expense that increases with the extent of fund diversification. During the financial crisis, my colleagues and I found in our diversification research that many funds of hedge funds were quite small in terms of assets under management. Even under a very conservative estimate, only a small minority of funds could possibly afford this necessary expense given the fees they charge. There are important economies of scale in the business of managing funds of hedge funds. This fact alone might explain the disappointingly poor after-fee performance of small funds of hedge funds both during and after the crisis.

In hindsight, it is quite understandable that institutional investors are fleeing hedge funds, which provided neither the high returns nor the protection from downside risk that were promised to investors before the financial crisis. However, hedge funds were marketed as "market neutral" or low-beta strategies. Thus, investors should not have been surprised that the market outperformed hedge funds during its unprecedented rise after the crisis. Diversified hedge fund strategies, whether self-managed or through a fund of hedge funds, do have favorable returns per unit risk that they undertake and thus have a place in a well-diversified asset portfolio. But diversification alone is not enough to satisfy the fiduciary responsibilities of institutional investors. The problem is that operational due diligence is expensive—and without appropriate due diligence, hedge fund diversification can be dangerous to one's financial health.

Notes

1. Hema Parmar, "Hedge Funds See Biggest Redemptions Since '09 as Returns Lag," Bloomberg (24 August 2016): www.bloomberg.com/news/articles/2016-08-24/hedge-funds-suffer-biggest-redemptions-since-2009-as-returns-lag.
2. Michael B. Marois, "Calpers to Exit Hedge Funds, Divest $4 Billion Stake," Bloomberg (15 September 2014): www.bloomberg.com/news/articles/2014-09-15/calpers-to-exit-hedge-funds-citing-expenses-complexity.
3. House Committee on Financial Services, *Hedge Funds and Systemic Risk in the Financial Markets: Hearing before the Committee on Financial Services*, 100th Cong., 1st sess., 13 March 2007, Committee Print 110–13, p. 34.
4. See especially §§ 3(c)(1) and 3(c)(7).
5. Carol J. Loomis, "The Jones Nobody Keeps Up With," *Fortune* (April 1966): 237–247.
6. Stephen J. Brown and William N. Goetzmann, "Hedge Funds with Style," *Journal of Portfolio Management*, vol. 29, no. 2 (Winter 2003): 101–112.
7. Stephen J. Brown, Greg N. Gregoriou, and Razvan C. Pascalau, "Diversification in Funds of Hedge Funds: Is It Possible to Overdiversify?" *Review of Asset Pricing Studies*, vol. 2, no. 1 (June 2012): 89–110.
8. Stephen J. Brown and Jonathan F. Spitzer, "Caught by the Tail: Tail Risk Neutrality and Hedge Fund Returns," working paper (19 May 2006): http://ssrn.com/abstract=1852526.
9. Stephen J. Brown, Thomas Fraser, and Bing Liang, "Hedge Fund Due Diligence: A Source of Alpha in a Hedge Fund Portfolio Strategy," *Journal of Investment Management*, vol. 6, no. 4 (Fourth Quarter 2008): 23–33.
10. Stephen J. Brown, William N. Goetzmann, Bing Liang, and Christopher Schwarz, "Mandatory Disclosure and Operational Risk: Evidence from Hedge Fund Registration," *Journal of Finance*, vol. 63, no. 6 (December 2008): 2785–2815.