The Dangers of Netting Risk in a Low Return Environment

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Of the risks facing asset allocators, netting risk is among the most overlooked. Often times an allocator will meticulously vet a number of alternative asset managers to ensure that each fills a unique need in the portfolio. In many cases they agree to a performance-based incentive fee (subject to a high-watermark) to ensure that there is an alignment of interests between principal and agent. In their attempt to create a diversified portfolio that will help weather market disruptions, the allocator has unknowingly introduced a form of risk that can steadily erode portfolio returns.[1] This form of risk, known as netting risk, can have a pernicious effect on portfolio returns, particularly in a low interest rate or high dispersion environment.

What is Netting Risk?

Before defining netting risk, we will illustrate the concept using a simple example. Consider an allocator that has split their capital evenly between managers A and B. If manager A earns $100 in a given year while manager B loses $100, the net effect to the allocator should be roughly zero. **However, in this scenario the allocator must pay an incentive fee to manager A despite having flat performance in aggregate. If the incentive fee is the industry standard 20%, the allocator has lost $20 as a result of netting risk.** If, however, manager A and B are commingled in a multi-strategy fund, the fund bears the netting risk, so the allocator does not incur any loss.

To generalize, netting risk is the hidden fee that investors pay when creating a diversified, multi-manager alternatives portfolio. It arises when some managers post positive returns and earn an incentive fee, while others realize negative returns and do not reimburse allocators with an implicit "negative incentive fee". Hence, it can be measured by the difference in incentive fees paid between a portfolio of single name funds, and one commingled fund. This difference is the effective negative incentive fee that would have been paid back to investors by the managers who post negative returns. In a commingled fund structure, such as a multi-strategy fund, the investor is effectively reimbursed the negative incentive fee, which offsets the positive incentive fee earned by managers who post positive returns. The fund bears the netting risk and the investor does not feel its effects. Ignoring high-watermarks for specific funds, netting risk can be approximated using the following formula:

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[1] http://www.pionline.com/article/20140523/ONLINE/140529928/netting-risk-not-widely-understood

$$Netting\ Risk = \gamma \sum_{\{i \in N : w_i r_i < 0\}} w_i r_i$$

where γ is the incentive fee (assumed equal across investments), w_i is the weight allocated to fund i, r_i is the return of fund i net of management fees (but gross incentive fees), and N is the total number of fund investments.

To apply this formula, we consider an example in which an allocator has split their capital evenly between two managers. If one manager has earned 20% while the other has lost 20%, and we assume a 20% incentive fee, we calculate the netting risk using the formula above: netting risk = 0.2 × 0.5 × -0.2 = -0.02. Using this simple example, we see that the multi-manager structure has cost the allocator 2% as a result of netting risk. On the other hand, if both managers are commingled in a single fund structure in which the manager bears the netting risk, the allocator does not incur any loss.

Factors Affecting Netting Risk

Interestingly, netting risk is not constant over time, and is influenced by two key factors: LIBOR and the dispersion of hedge fund returns.

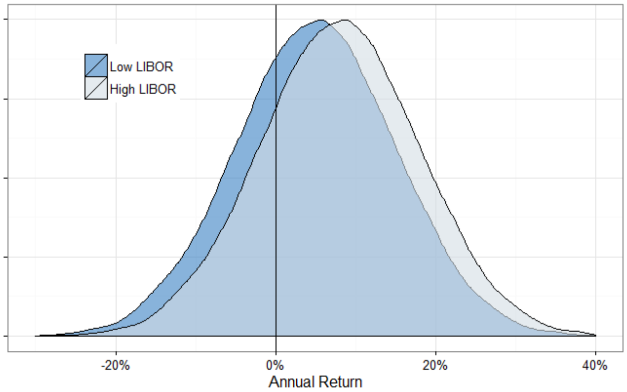
1. LIBOR

Traditionally, a diversified portfolio of hedge funds is benchmarked to LIBOR + 5-7% because investors expect to be compensated for incurring risk, and demand a risk premium as a result. From this perspective, alpha returns are compressed when LIBOR is low because investors will not demand as high returns for incurring risk. As a result, prospective hedge fund returns are likely to be lower as long as LIBOR remains depressed. While hedge funds may continue to provide the same risk premium, LIBOR is lower and total returns will be lower as a result. **All else equal, netting risk rises when hedge fund returns are lower, because it increases the odds that some alternative managers will have positive returns while others have negative returns.**

To illustrate this point, consider **Exhibit 1**, which depicts hypothetical hedge fund returns when LIBOR is 0%, and when LIBOR is 3%. The model assumes the mean hedge fund provides 5% alpha[2] and the dispersion of returns is 10%. The simulation reveals that when LIBOR is 3%, hedge funds produce negative returns 21% of the time, but when LIBOR is 0%, that number rises to 31%. If an allocator had invested a portion of his or her alternatives bucket in hedge funds that posted negative returns, they would feel the impact of netting risk given that other managers realized positive returns and thus earned an incentive fee.

Exhibit 1

Hypothetical Hedge Fund Returns



Source: Weiss

2. Dispersion

Netting risk is also exacerbated when the dispersion of hedge fund returns rises. Much like a lower LIBOR, higher dispersion increases the chances that some hedge funds will post negative returns, while others earn a performance fee. **Exhibit 2** shows two hypothetical hedge fund return distributions, and both assume the mean hedge fund return is 5%. However, the blue distribution assumes that hedge fund return dispersion is 8%, while the grey distribution assumes hedge fund return dispersion is 15%. This simulation shows the blue distribution is negative 26% of the time, but the grey distribution is negative 37% of the time, indicating that netting risk is higher when hedge fund return dispersion widens.

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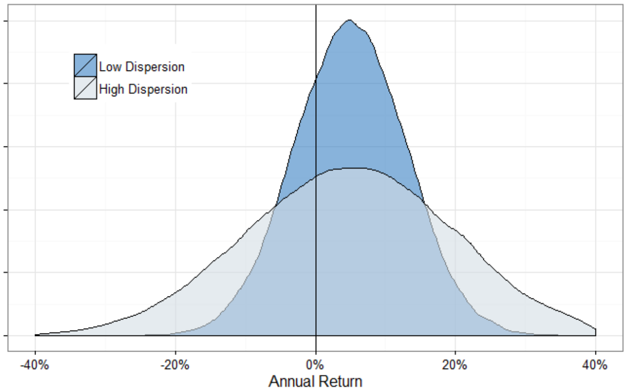
[2] "Alpha Unmasked - Disentangling Portfolio Returns", Weiss Multi-Strategy Advisers LLC, November 2015

This is particularly alarming today, given that hedge fund dispersion is on the rise. In fact, a recent report by Credit Suisse indicated that hedge fund performance dispersion is now at "historically wide" levels, thus indicating that netting risk may be on the rise.[3]

Exhibit 2

Higher Dispersion Creates Netting Risk

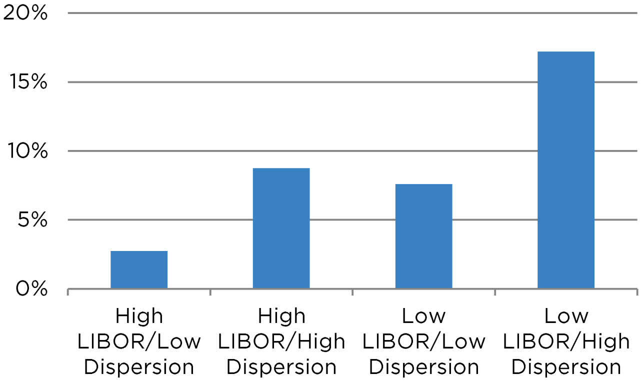


Source: Weiss

Exhibit 3 illustrates the effects of netting risk in various LIBOR and dispersion regimes. The chart reveals that in an environment characterized by high dispersion or low LIBOR, netting risk can corrode a substantial portion of portfolio returns, and threaten asset owners' ability to meet objectives. Given current market conditions, allocators may consider strategies to reduce netting risk in their portfolios.

Exhibit 3[4]

Netting Risk as a Proportion of Gross Returns



Source: Weiss

Avoiding Netting Risk

In an era of zero bound interest rates and financial repression, prospective returns on both beta and alpha strategies may be lower than they have been historically[5]. This presents a challenge for institutional investors who must continue to fund liabilities and spending rates. With this in mind, they should consider several strategies that may help them lower the impact of netting risk on their portfolio.

The first strategy to consider is reducing the dispersion of returns in the alternatives bucket. In practice, this may mean allocating to a narrower universe of hedge fund managers. Of course, this comes at the cost of portfolio diversification. A homogenous hedge fund portfolio should have very little netting risk, due to low performance dispersion, but it fails to provide the necessary portfolio diversification and is thus impractical.

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[3] "Identifying and Quantifying Market Risk: Structural Shifts Channel Market Opportunity and Alpha," Credit Suisse Prime Services, November 25, 2015.

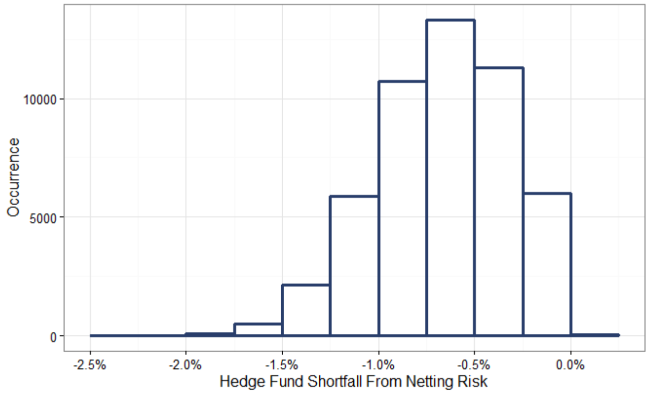
[4] LIBOR is 3% in high LIBOR environments and 0% in low LIBOR environments. Dispersion in high and low regimes is 15% and 8% respectively. The model assumes the alpha risk premium is 5%, net of management fees but gross of performance fees.

[5] "Can Beta Save the Day?", Weiss Multi-Strategy Advisers LLC, December 2015

Investors may also avoid netting risk through the manager selection process. By allocating to top performing hedge funds, investors can neutralize the drag that netting risk may have on their portfolio. To illustrate this, a Monte Carlo simulation is used to quantify how much outperformance from manager selection is necessary to overcome the netting risk drag. This simulation compares two hypothetical portfolios: the first treats all managers as independent, while the second commingles them in single fund structure. The model assumes 20 underlying funds, a normal return distribution, a “2 and 20” fee structure, an annualized return of 8% and a standard deviation of 15% for each of the underlying funds.

Exhibit 4

How Netting Risk Can Erode Returns



Source: Weiss

After 50,000 simulations, the multi-strategy fund outperformed by an average of 0.66% over a 1 year period, meaning that an investor would have to add 66 bps annually through manager selection in order to overcome the effects of netting risk. In theory, the effects of netting risk should be lower due to a high-watermark agreement, which lowers the effective performance fee for funds that had previously underperformed. In practice, however, netting risk is crystalized when investors redeem from underperforming funds, or when an underperforming fund returns capital. In both cases, the investor foregoes the benefits of a high-watermark.

One final option for investors to consider is an allocation to a multi-strategy fund. Multi-strategy funds commingle a number of investment managers under a single fund structure, and in doing so, may be a valuable tool for investors looking to reduce netting risk. There are several important considerations that investors should keep in mind, however.

First, not all multi-strategy managers bear the netting risk. In many cases, funds will use a fee pass-through structure, meaning that investors will still pay an incentive fee to outperforming managers, even if the net performance of the fund is flat or negative. A second important consideration is the diversification of the sub-portfolios in the multi-strategy fund. If the underlying funds are homogenous, there will be little netting risk, but the investor does not receive the benefits of diversification. If the underlying portfolios are diversified, however, the netting risk may be high but the netting risk is only incurred by the manager, not the investor. As we have seen netting risk is not a trivial fee, so the management fee and performance fee is effectively much lower if the multi-strategy fund is both diversified and does not pass the netting risk on to the investor.

Key Takeaways

The low interest rate/low return environment has created considerable headwinds for investors. They not only have to provide attractive risk adjusted returns for their beneficiaries, but they must do so amid a challenging investment landscape. These challenges are made more difficult by netting risk, which can slowly erode portfolio returns and prevent asset owners from meeting their objectives. While netting risk may have been a minor concern in a high return environment, it is particularly troubling in an environment characterized by low LIBOR or high dispersion.

Fortunately, there are steps that investors can take to reduce netting risk. They include: reducing the cross-sectional volatility of the alternatives bucket, selecting superior alternatives managers, and allocating to a diversified multi-strategy manager that bears the netting risk. By carefully considering these options, allocators can potentially reduce netting risk, which may improve the likelihood that they will meet their risk and return objectives.

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