

# THE CASE FOR LONG/SHORT EQUITY: FOUR REASONS TO INCLUDE THE STRATEGY IN A PORTFOLIO

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INVESTMENT STRATEGY AND RISK

The task of balancing equity risk with the goal of achieving meaningful returns is top-of-mind for many investors. The search is on for strategies that can fill this role, whether through asset allocation or choice of securities within the equity space. Into this fray appear long/short equity strategies, which allow managers to assume both long and short positions in their ideas and to vary their exposure to the equity market over market cycles. We believe that long/short strategies, with their risk-managed alpha generation potential, are worth consideration as part of an investor's equity allocation and the overall investment mix.

In our view, there are four key reasons to consider an allocation to long/short strategies:

1. Unlock different sources of alpha
2. Reduce equity beta risk
3. Improve return/risk profile of an equity allocation
4. Access through new, "liquid alternative" fund structures that offer daily liquidity, lower fees and more transparency.

The universe of long/short funds can be subdivided into three main sub-strategies: long-biased (funds that hedge out some, but not all, market beta), equity market neutral (funds that hedge out all market beta and focus exclusively on alpha generation), and short-biased. The focus of this paper is long-biased long/short funds.<sup>1,2</sup>

## REASON #1: UNLOCK DIFFERENT SOURCES OF ALPHA

The ability to engage in short-selling increases a portfolio manager's opportunity to generate alpha from security selection. Without an ability to short, a negative view on a security can only be expressed by not holding that security, and the magnitude of the underweight relative to the index is limited to the security's weight in the benchmark. For many securities, this weight amounts to mere basis points. The ability to short eliminates such constraints. By hedging out some market risk (beta), shorting also enables long/short funds to take bigger positions in their higher-conviction long ideas compared to more constrained long-only strategies. Furthermore, a long/short manager can invest more than 100% of the portfolio long by using proceeds from the short sales (although not all managers use leverage in this manner, and some fund structures are subject to certain regulatory constraints regarding maximum allowable leverage, as discussed later in this paper).

<sup>1</sup> For the purposes of completeness, we proxy the long/short universe with indices from two widely accepted providers—Hedge Fund Research, Inc.'s HFRI Equity Hedge (Total) Index and Credit Suisse's Long/Short Equity Index. HFR's index equally weighs the funds, while the Credit Suisse index asset-weights its constituents. We compare this data to long-only managers as proxied by the eVestment database, and to long-only benchmarks.

<sup>2</sup> Long/short hedge fund investing entails unique risks. Please see Appendix B for a discussion of these risks.

Empirical evidence suggests that security selection skill on the long side can add meaningfully to hedge funds' performance.

In addition to shorting, long/short funds have the flexibility to deviate from an equity benchmark in terms of the portfolio's size and style focus and composition in a way that more benchmark-centric long-only managers may not be able to do. These factors can allow long/short hedge funds to take advantage of the manager's investment expertise in sector selection. A long/short hedge fund may perform intense sector research and form a thesis on the relative performance of an entire sector. If the fund believes that the given sector should outperform, the manager can significantly overweight the sector relative to a benchmark. Conversely, if the fund formulates a negative view on the sector, it can short the sector, using either individual stocks or a broader ETF to express the view.

Long/short hedge funds can similarly express their views on a specific geographic region.

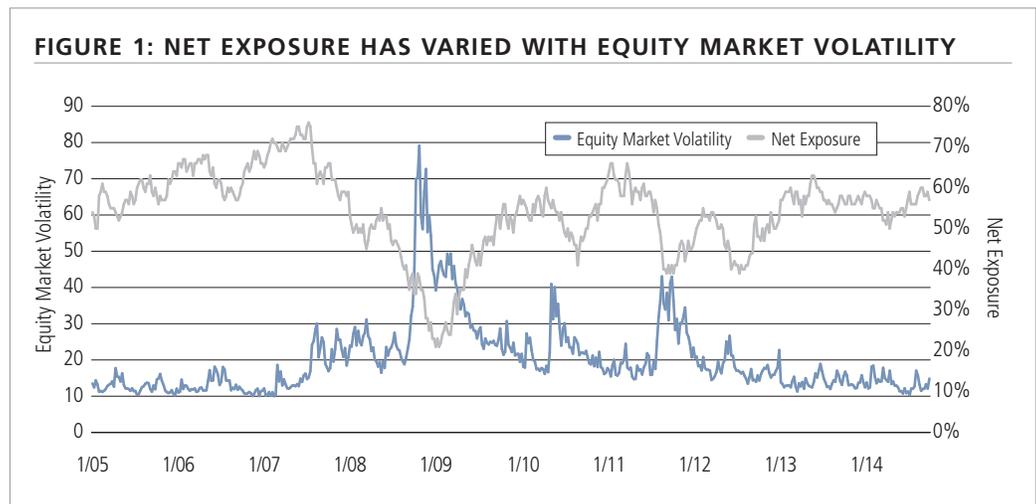
Long/short hedge funds can also use out-of-benchmark securities to attempt to generate alpha on both the long and short sides, in a way that more benchmark-centric long-only managers may not be able to do. Such securities can include stocks in different regions, or of different market capitalization or style, than those in the manager's benchmark.

Empirical evidence suggests that security selection skill on the long side of hedge funds' trades can add meaningfully to their performance (for further discussion, please see Appendix A). There is less data available to analyze the effect of security selection skill on the short side, but anecdotal evidence suggests that alpha generation capabilities on the short side vary substantially by manager.

**REASON #2: REDUCE EQUITY BETA RISK**

Short exposure, when used to balance long exposure, works to reduce market beta—betas on the long side and the short side will partially offset each other. In addition, long/short funds are able to hold cash in their portfolio, with fewer constraints than is the case for more benchmark-centric long-only managers. These two factors help reduce beta and volatility.

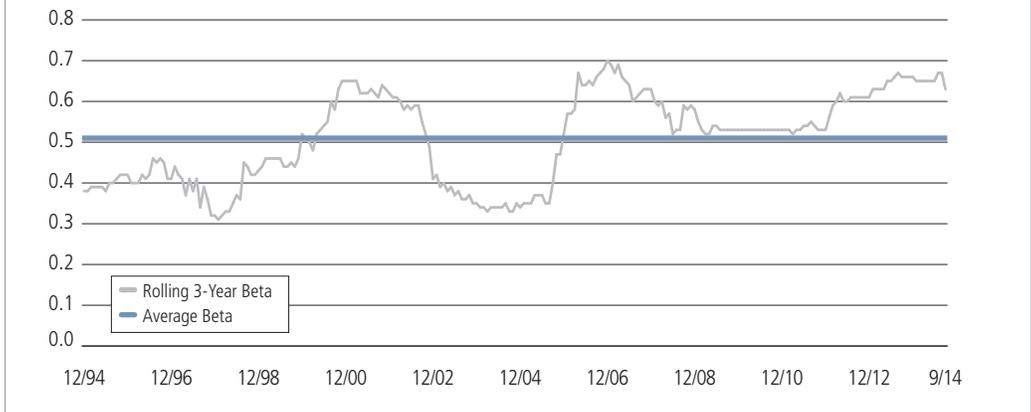
Often, long/short funds have a modest net long bias (around 30% – 60%); however, as Figure 1 shows, over the past 10 years it has generally varied from a low of around 20% to a high of around 75%. Historically, when equity market volatility has been high, long/short managers decreased their net exposure; when volatility has been subdued, they raised their net exposure back up (see Figure 1).



Source: Morgan Stanley, Bloomberg. The net exposure figures represent the median exposure of a cross-section of representative long/short funds. Equity market volatility is proxied by the VIX Index. Data through September 2014. **Past performance is not indicative of future results.**

Long/short funds' beta to global equities is typically in line with their net exposures, and has averaged around 0.5 over the long term (see Figure 2).

**FIGURE 2: LONG/SHORT BETA TO GLOBAL EQUITIES HAS AVERAGED AROUND 0.5**



Source: HFR, MSCI. Rolling 3-year beta to the MSCI ACWI Index, using monthly data through September 2014.

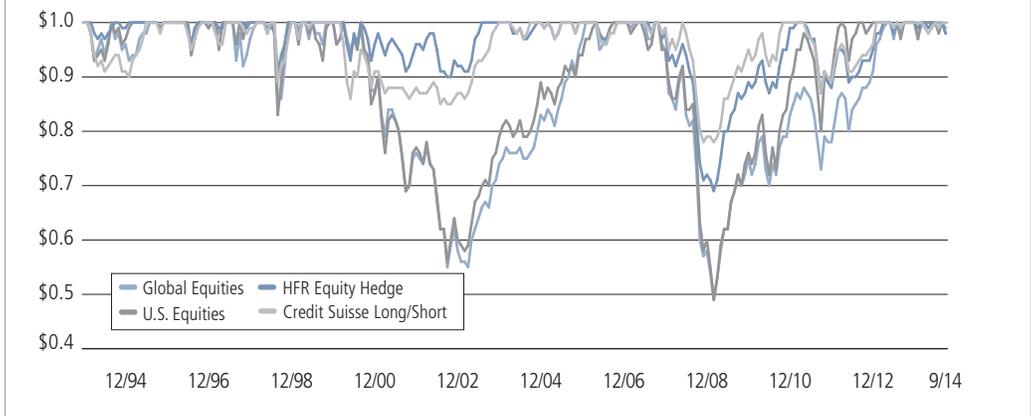
**Past performance is not indicative of future results.**

Historically, long/short hedge funds have achieved attractive downside risk mitigation compared to long-only benchmarks.

With this level of beta, long/short funds tend to underperform equity markets in strong, sustained bull markets, but are able to mitigate downside risk and outperform in market downturns. Historically, long/short hedge funds have in fact achieved attractive downside risk mitigation in down markets compared to long-only benchmarks (see Figure 3).

**FIGURE 3: LONG/SHORT HEDGE FUNDS HAVE PROVIDED ATTRACTIVE DOWNSIDE MITIGATION**

Drawdown Analysis of Hedge Funds vs. Equity Benchmarks



Source: HFR, Credit Suisse, Russell, MSCI. Monthly data through September 2014. Hedge fund index data in U.S. Dollars; long-only index data in local currencies. U.S. equities proxied by the Russell 3000 Index; global equities proxied by the MSCI ACWI Index. **Past performance is not indicative of future results.**

Generally, beta has been higher in strong markets and lower in challenging markets. In this way, long/short managers can be viewed as engaging in tactical asset allocation.

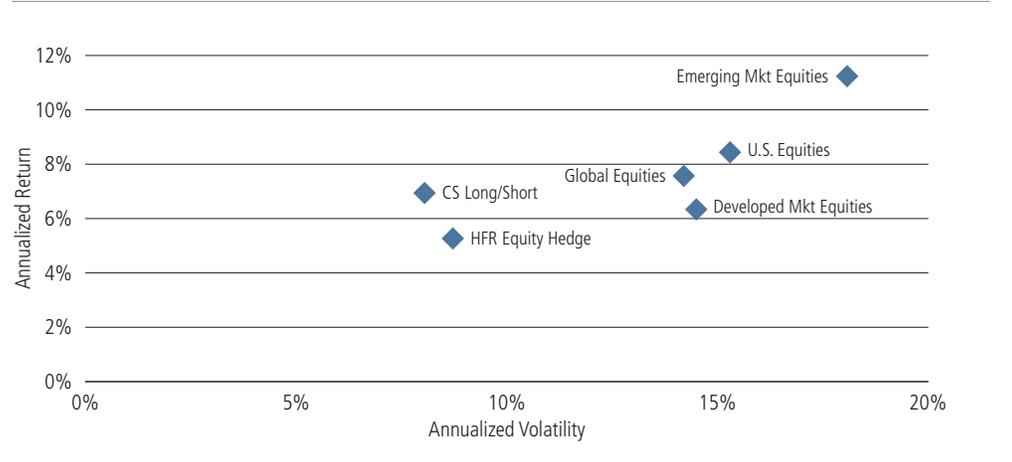
Long/short fund beta has varied, from a low of 0.30 to a high of 0.70 over the past 20 years,<sup>3</sup> partly based on overall equity market conditions—generally, beta has been higher in strong markets and lower in challenging markets. In this way, long/short managers can be viewed as engaging in tactical asset allocation.

**REASON #3: IMPROVE RETURN/RISK PROFILE OF AN EQUITY ALLOCATION**

An analysis of the historical performance of the long/short hedge fund universe, as proxied by the Credit Suisse and HFR indices, shows that historically, long/short funds have achieved better risk-adjusted performance over market cycles than long-only managers and benchmarks, generating equity-like returns with about half the volatility of equity markets (see Figure 4).

**FIGURE 4: LONG/SHORT HEDGE FUNDS HAVE ACHIEVED SUPERIOR RETURN/RISK TO LONG-ONLY BENCHMARKS**

Past 10 Years' Return and Volatility



Source: HFR, Credit Suisse, Russell, MSCI. 10-year monthly data through September 2014. Hedge fund index data in U.S. Dollars; long-only index data in local currencies. U.S. equity data proxied by the Russell 3000 Index; Global, Developed Market and Emerging Market data proxied by MSCI's ACWI, EAFE and EM Indices, respectively. **Past performance is not indicative of future results.**

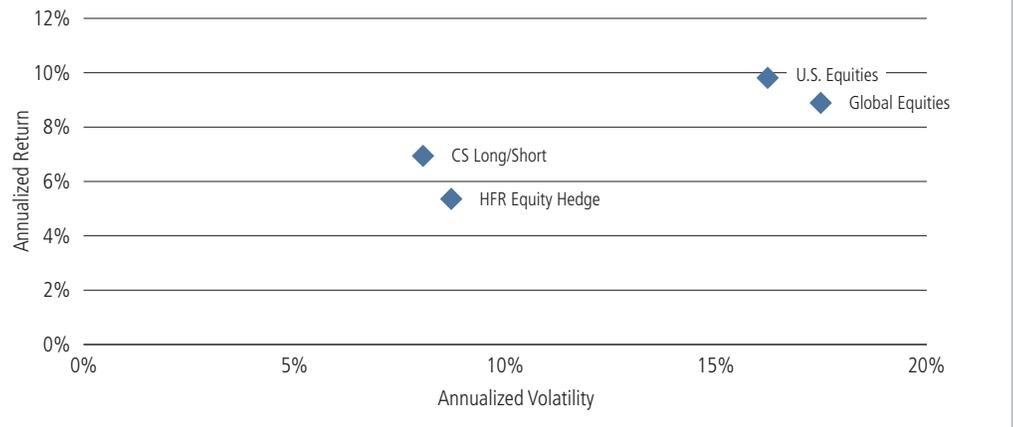
<sup>3</sup> Rolling 3-year beta, computed based on monthly returns of the HFR and Credit Suisse long/short hedge fund indices and the MSCI ACWI Index.

Including long/short funds in a portfolio has the potential to improve its overall return/risk ratio.

Comparing long/short funds to a universe of actively managed equity strategies presents a similar picture (see Figure 5).

**FIGURE 5: LONG/SHORT HEDGE FUNDS HAVE ACHIEVED SUPERIOR RETURN/RISK TO LONG-ONLY MANAGERS**

Past 10 Years' Return and Volatility



Source: HFR, Credit Suisse, eVestment. 10-year monthly data through September 2014. All data in U.S. Dollars. Long-only universe data is the median data from eVestment's U.S. all-cap equity and Global equity universes. **Past performance is not indicative of future results.**

In this way, the universe of long/short funds has used its equity risk capital more efficiently than has the universe of long-only managers or broad equity benchmarks. Including long/short funds in a portfolio, therefore, has the potential to improve the portfolio's overall return/risk ratio. In addition, for investors employing risk-balanced asset allocation models, such efficiency may free up a portion of the risk budget to deploy elsewhere.

**REASON #4: ACCESS THROUGH NEW, 'LIQUID ALTERNATIVE' FUND STRUCTURES**

Increasingly, hedge fund strategies are available in retail fund vehicles, which, in our view, have significant benefits in terms of liquidity, fees and regulatory oversight.

Increasingly, hedge fund strategies are available in retail fund vehicles, such as U.S. registered funds ('40-Act funds) and offshore UCITS funds, providing much wider access to hedge fund strategies. In our view, the new fund structures have significant benefits in terms of liquidity, fees and regulatory oversight.

Hedge funds have generally been structured in a less liquid format than traditional asset classes, with periodic (often monthly or quarterly) redemption periods and, in many cases, limits on how quickly an investor can redeem after the initial investment (lock-up periods) and/or on how much investors can redeem at a time (gates).

Liquid alternative funds, by contrast, offer daily liquidity and NAV. This can aid investors in tactical portfolio rebalancing and help limit the portfolio's illiquidity in a crisis event. It can also free up a portion of the investor's illiquidity budget for other strategies that may not lend themselves to daily liquidity and that may have the potential to offer a significant illiquidity premium.

The fees charged by liquid alternatives are typically lower than fees on traditional hedge fund vehicles. Unlike traditional hedge funds, '40-Act funds do not charge performance-based fees (although UCITS funds may charge such fees).

In addition, liquid alternative funds offer greater transparency (including positions, leverage and valuations) compared to traditional hedge fund structures, and must meet certain regulatory constraints regarding maximum allowable leverage and minimum amount of assets exhibiting daily liquidity. A majority of their holdings must be able to be liquidated in the public markets at quoted prices. They must hold collateral related to the liabilities from the use of short sales. Leverage in such structures is limited as a proportion of the gross asset value of the fund. We believe long/short strategies are particularly well-suited to meet these requirements, with the fund structure typically having limited impact on their strategy or process, given the nature of the securities in which they invest and the typical amount of leverage they employ.

**OTHER CONSIDERATIONS**

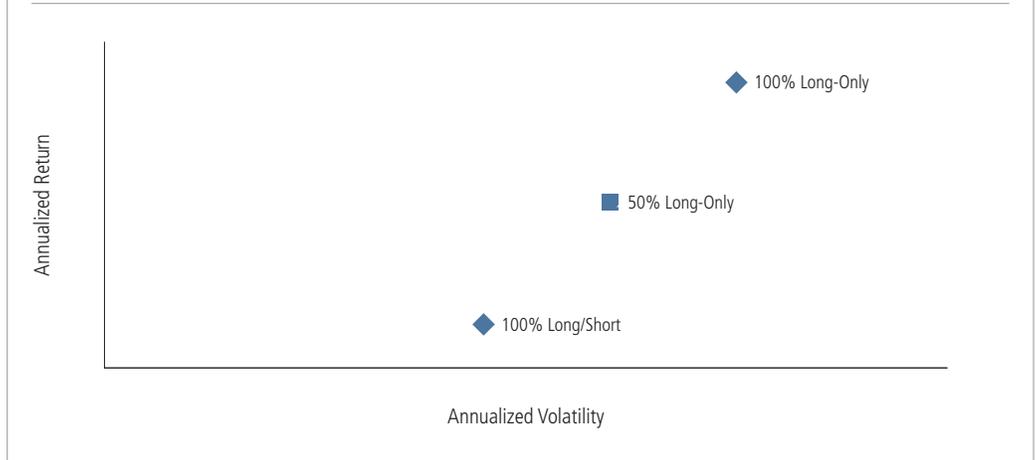
**How Much to Allocate, and Where in the Portfolio?**

Since long/short hedge funds invest in equities, and since their correlations to equity markets are around 0.9,<sup>4</sup> investors may wish to consider long/short hedge funds as implementation vehicles for their equity exposure—in our view, an attractive complement to long-only strategies—rather than as part of an “alternatives” allocation.

The “optimal” allocation to long/short funds varies by investor and is largely a function of the investor’s risk appetite in equity markets. Figure 6 shows an illustrative risk/return tradeoff, with a 100% long-only portfolio, a 100% long/short portfolio, and a 50/50 portfolio of long-only and long/short. Investors can choose the point on the chart at which they are most comfortable with the overall risk level.

The “optimal” allocation to long/short funds is largely a function of the investor’s risk appetite in equity markets.

**FIGURE 6 – RISK/RETURN PROFILE ILLUSTRATION**



Source: Neuberger Berman. For illustrative purposes only. Profiles are based upon historical benchmark data and Neuberger Berman views.

Investors should also consider how much tolerance for risk they may have during periods of market downturns. (Figure 3 illustrates drawdowns experienced by equity markets and long/short funds over the past 20 years.)

<sup>4</sup> Computed based on three-year rolling correlations of monthly returns of the HFR and Credit Suisse long/short hedge fund Indices and the MSCI World and Russell 3000 Indices.

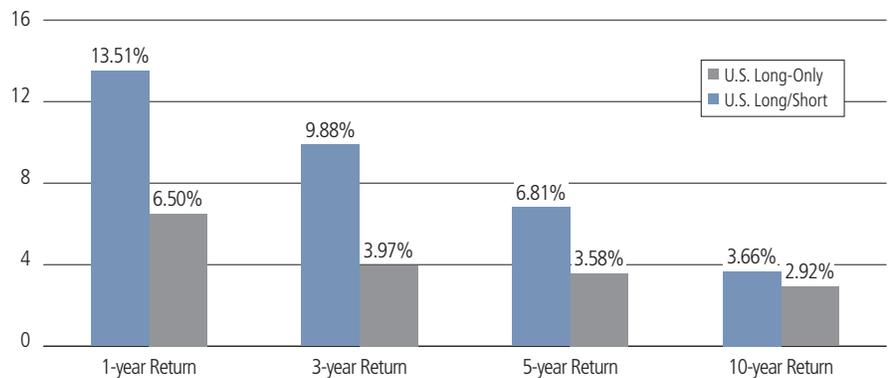
In our view, manager skill is critical in a successful long/short investment program.

**Importance of Manager Selection**

In our view, manager skill is critical in a successful long/short investment program. Alpha can be either positive or negative, and the fewer constraints on investing, the larger is its potential magnitude (on the upside or downside). In fact, dispersion among individual manager returns is substantial in hedge funds.

As an example, Figure 7 shows the dispersion of 1-, 3-, 5-, and 10-year returns for a peer group universe of U.S. equity-focused long/short managers versus the eVestment peer group universe of U.S. equity-focused long-only managers. The variation is substantial, and meaningfully larger for the long/short peer group than is the case of long-only managers.

**FIGURE 7: PERFORMANCE DISPERSION – U.S. LONG/SHORT VS. LONG-ONLY FUNDS**  
25th – 75th Dispersion



Source: Neuberger Berman, eVestment. Long/short data reflects a peer group of U.S. equity-focused long/short managers established by Neuberger Berman based upon information voluntarily reported to Neuberger Berman. Long-only data proxied by the eVestment U.S. all-cap equity universe. Performance data through December 2012. Chart shows the difference between annualized returns of the 25th percentile and 75th percentile funds over each respective time period. **Past performance is not indicative of future results.**

Return and risk profiles also differ by funds’ gross exposure levels and shorting strategies. Holding net exposure constant, a fund with larger gross exposure is running a more active portfolio than a fund with smaller gross exposure. Therefore, the former fund would have more capacity to generate alpha (positive or negative) and can also have higher drawdowns and/or volatility. Similarly, funds that engage in fundamental shorting of individual securities have the potential for extra alpha generation (again, positive or negative) relative to funds that engage only in overall market shorting that acts solely as a beta hedge to its long positions.

As inter-stock correlations have started to trend down since mid-2012, hedge fund alpha has started trending back up.

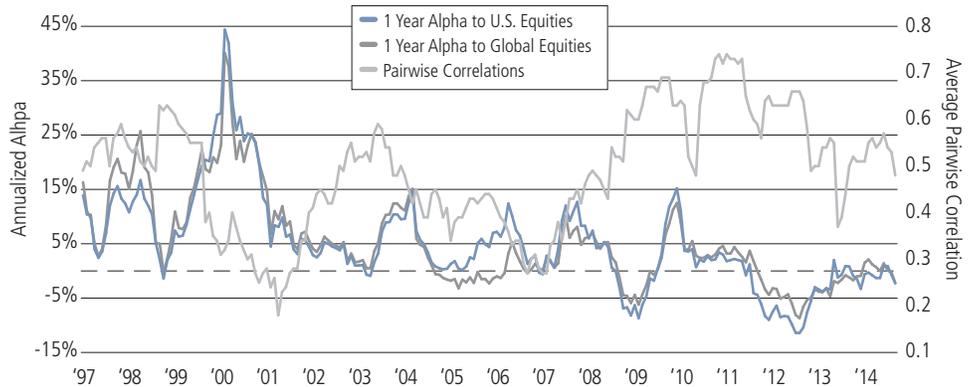
**Recent Performance and Outlook**

The beginning of this decade was a challenging time for long/short hedge fund performance, with the overall universe having generated negative Jensen’s alpha (risk-adjusted excess returns)—see Figure 8. However, alpha has been rebounding starting with the second half of 2012—a trend we believe will continue. In our view, much of the underperformance in the earlier period and the subsequent rebound can be attributed to two major challenges experienced by the broader equity markets in this time frame.

**Challenge 1: High Inter-Stock Correlations**

The period between the global financial crisis of 2008 and the second half of 2012 was characterized by abnormally high correlations between stocks. Stock movements were driven more by macroeconomic developments and overall market sentiment and less by individual company fundamentals. Such an environment creates headwinds for funds that focus primarily on security selection, which is the case for most long/short hedge funds. Figure 8 shows the impact that inter-stock correlations have historically had on hedge fund alpha. It shows the rolling one-year Jensen’s alpha of the HFR Equity Hedge Index over both the Russell 3000 and the MSCI ACWI Indices and compares it to average rolling one-year stock pairwise correlations over time. (Data for the Credit Suisse Index looks quite similar.) The alpha has had an inverse relationship with the pairwise correlations, declining when correlations increased and increasing when correlations declined. As inter-stock correlations have started to trend down since mid-2012, hedge fund alpha has started trending back up.

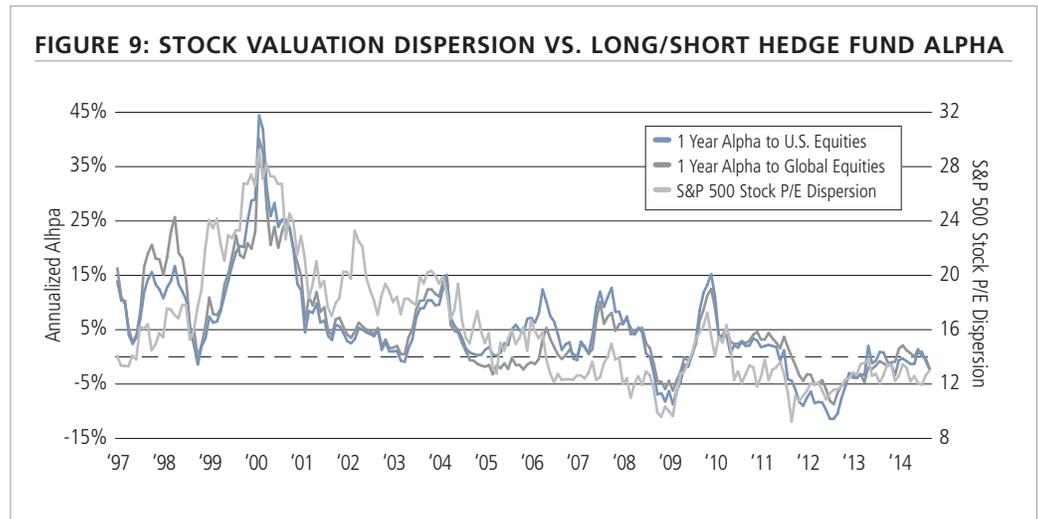
**FIGURE 8: INVERSE RELATIONSHIP BETWEEN INTER-STOCK CORRELATIONS AND LONG/SHORT HEDGE FUND ALPHA**



Source: HFR, MSCI, Russell, data through September 2014. One-year rolling alpha of the HFR Equity Hedge Index to the Russell 3000 and MSCI ACWI Indices for U.S. and global equities, respectively. Pairwise correlations data is the average correlation of the monthly returns of the 100 largest stocks currently in the S&P 500 Index to the monthly return of the S&P 500 Index, over the course of one year. **Past performance is not indicative of future results.**

**Challenge 2: Low Interest Rates**

Higher interest rates increase a business’s cost of capital, leading to increased differentiation in the performance of companies with different capital structures. With higher rates come higher interest expenses, and a company with relatively thin operating margins and too much leverage may find its debt burdens providing significant headwinds in such an environment. On the other hand, a company with less debt and higher operating margins will likely fare better in such an environment. Historically, there has been a positive correlation between intermediate-term interest rates (a key component of corporate capital costs) and the amount of valuation dispersion (based on companies’ price-to-earnings multiples) in the market.<sup>5</sup> There has also been a positive correlation between valuation dispersion in the market and hedge fund Jensen’s alpha (see Figure 9).



Source: HFR, MSCI, Russell, Bloomberg, monthly data through September 2014. One-year rolling alpha of the HFR Equity Hedge Index to the Russell 3000 and MSCI ACWI Indices for U.S. and global equities, respectively. Stock dispersion data is the difference between the 80th percentile and 20th percentile price-to-earnings ratio of the stocks in the S&P 500 Index. **Past performance is not indicative of future results.**

Once interest rates begin to rise, we believe that valuation dispersion should increase, and security selection can be better rewarded.

Once interest rates begin to rise and approach historical norms, we believe that valuation dispersion should also increase, leading to an environment in which fundamental stock pickers with more effective security selection can be better rewarded.

Another challenge of near-zero interest rates has been their impact on the short rebate, the interest a fund receives on cash proceeds from its short sales, less the various transaction costs and borrowing fees associated with the mechanics of shorting. Typically these proceeds are held in an interest-bearing money market account. In the current environment of near-zero interest rates, the short rebate does not amount to much (and may in fact be negative, as transaction costs may outweigh the interest), but in a more normalized (e.g., pre-crisis) interest rate environment, the short rebate has added as much as 150 – 200 basis points of performance for managers with substantial short exposure.<sup>6</sup>

<sup>5</sup> Based on observing the direction of valuation dispersion as illustrated in Figure 9 and the path of intermediate-term interest rates, proxied by the Barclays U.S. Treasury Intermediate Index (maturities between 1 – 10 years).

<sup>6</sup> Source: NB Alternatives, 2014 Hedge Fund Strategy Outlook, pages 6 – 7.

### CONCLUSION

Long/short equity can play an important role in a portfolio's equity allocation, with the potential to reduce equity risk, improve one's overall risk-return profile, and unlock additional sources of alpha compared to more benchmark-centric long-only equity strategies. Historically, long/short funds have achieved equity-like returns with less volatility than equity markets via, in our view, a combination of security selection (as evidenced by their 13F filings) and asset allocation skill (varying their net exposure and beta based on various market regimes). Because long/short hedge funds invest in equities, we believe that they may be considered as implementation vehicles within the investor's equity exposure, rather than as part of an "alternatives" allocation. With the growth of the liquid alternatives space, investors have more flexibility than ever in choosing implementation options that better fit their needs.

#### **APPENDIX A: SECURITY SELECTION IN HEDGE FUND PORTFOLIOS**

To determine the magnitude of security selection skill on the long side of hedge fund portfolios, we examined the universe of stocks owned by hedge funds, as proxied in their 13F filings.<sup>7</sup> We created a monthly return series, starting in June 2000, dollar-weighting all stocks that appeared in 13F filings in a given month. We then compared this return series to their relevant benchmark. Since 13F filings cover primarily U.S. exchange-traded stocks, we compared the series to the Russell 3000 U.S.-listed all-cap universe. Over this time period, the 13F universe has outperformed the broader index in 61% of the months, by an average of 34 bps per month. Compounded, this represents an annualized 3.8% in excess returns.

#### **APPENDIX B: RISKS OF LONG/SHORT HEDGE FUND INVESTING**

The ability to engage in short selling introduces a number of unique considerations. Short selling presents additional risk exposures and other risks (losses on short sales are theoretically unlimited, as losses arise from increases in the value of the security sold short). A long/short portfolio can invest the proceeds received from selling securities short in additional long positions, essentially engaging in a form of leverage and increasing the gross exposure to changes in the value of equity securities. If gross exposure is above 100%, a long/short portfolio has more individual-security exposures than does a long-only fund, which may magnify the gains or losses for the fund. Furthermore, individual short stock positions, like individual long stock positions, carry idiosyncratic risk. We believe that this risk can be mitigated through diversification.

Funds that engage in short selling will have increased expenses, including in the form of transaction costs and borrowing fees. Further, short sales expose a fund to lender risk, i.e., if the lender of the borrowed security recalls the securities and the fund is unable to find another lender, the fund may be required to cover the short position at a time when the security has appreciated in value, thus resulting in a loss to the fund. Short positions also typically involve the risk that the third party to the short sale may fail to honor its contract terms. Finally, in the past, in response to market events, regulatory authorities in various countries, including the United States, enacted temporary rules prohibiting the short-selling of certain stocks, and, as a result, a long/short fund may not be able to fully implement its short-selling strategy.

<sup>7</sup> SEC Form 13F, or the "Information Required of Institutional Investment Managers Form," is a form that all institutional investment managers with over \$100M in qualifying equity assets under management are expected to file. It is filed quarterly and contains a list of their holdings as of quarter-end. Securities subject to the rule are primarily those traded on U.S. exchanges and include common stocks, ETFs, certain debt securities, equity options, and warrants.



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