



# Managing Portfolio Volatility & Drawdown Risk with Long/Short Equity

Charles Cook, CFA  
Portfolio Strategist

The Boston Company Asset  
Management, LLC

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Long/short solutions help solve for the dual problems of low fixed-income returns and high equity-market volatility, making this seem like an optimal time for this liquid alternative strategy.

## EXECUTIVE SUMMARY

Charles Cook from BNY Mellon's The Boston Company Asset Management affiliate discusses the potential benefits of long/short equity strategies to reduce portfolio volatility while targeting positive returns. He discusses how investors can incorporate these liquid equity alternatives into a diversified portfolio to better manage downside risk in a challenging return environment.

Asset allocation in the current investment climate presents investors with several challenges. Around the world, fixed-income yields have fallen to historic lows since the Great Recession, and prospective real returns are likely to be exceptionally low or negative. Although we continue to view equities as an attractive asset class, many equity markets and equity-like investments have performed quite well, and valuations have risen. In addition, as investors shift away from fixed-income exposure in favor of equities<sup>1</sup>, they are seeing more total volatility in their portfolios, while assuming a greater risk of significant loss if equities decline materially.

We believe one solution to this risk/return dilemma is an investment that repackages the raw material of public equity markets in a way that has the potential to lower risk: long/short equity.

## THE BOND PROBLEM

Over the past three decades, fixed income has served a valuable role in diversified portfolios. It reduced volatility, added downside protection and provided a positive real return, on an annualized basis. However, the next several years may prove to be more challenging for this asset class, as yields have declined to historically low levels. We believe the global economy will continue on its course of gradual improvement marked by an environment of interest rate "normalization" likely resulting in very low – or even negative – nominal and real returns for traditional core bond investors.

<sup>1</sup> For more information on this, please see "Preparing for the End of the 30-Year Bull Market in Bonds," published by The Boston Company in May 2013. [http://www.thebostoncompany.com/assets/pdf/viewsinsights/May13\\_Views\\_Insights\\_End\\_30Yr\\_Bul\\_Mkt.pdf](http://www.thebostoncompany.com/assets/pdf/viewsinsights/May13_Views_Insights_End_30Yr_Bul_Mkt.pdf).



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In the current environment, bond investors have little protection from the falling bond prices that occur as yields rise.

Periods of rising interest rates were not unusual during the bond bull market that began about 30 years ago, but they have almost never occurred with bond coupons as low as they are now. This is an important distinction. Coupon income, the most significant component of total return to bonds over long periods of time, has historically provided a return cushion during times of declining bond prices.

Over the past 20 years, there have been 8 occasions when bond yields, as represented by the 10-year U.S. Treasury, have risen by 125 basis points or more (Exhibit 1). Usually, these episodes resulted in negative returns, although the extent of the damage was reduced by the coupon income earned by the underlying bonds.

**Exhibit 1. Bond Returns During Periods of Rising Treasury Yields**

Trough <sup>2</sup>	Peak <sup>2</sup>	10-Year Yield Change <sup>2</sup>	Beg. Period Coupon <sup>1</sup>	Price Return <sup>1</sup>	Coupon Return <sup>1</sup>	Total Return <sup>1</sup>
10/15/93	11/7/94	287	7.83	-10.14	5.20	-5.30
1/18/96	7/8/96	153	7.34	-5.94	2.95	-3.03
10/5/98	1/20/00	263	6.98	-10.16	7.92	-2.35
11/7/01	4/1/02	125	6.66	-4.66	2.39	-2.44
6/13/03	6/26/06	212	5.87	-9.90	14.92	4.33
12/18/08	4/5/10	191	5.27	1.38	6.29	7.14
10/7/10	2/8/11	135	4.35	-4.11	1.29	-3.02
7/24/12	9/5/13	161	3.75	-6.24	3.46	-3.57

<sup>1</sup> Source: Bloomberg.

<sup>2</sup> Source: Barclays Research. Bond market performance and coupon as measured by the Barclays U.S. Aggregate Index, a widely used index that represents the broad domestic fixed income market.

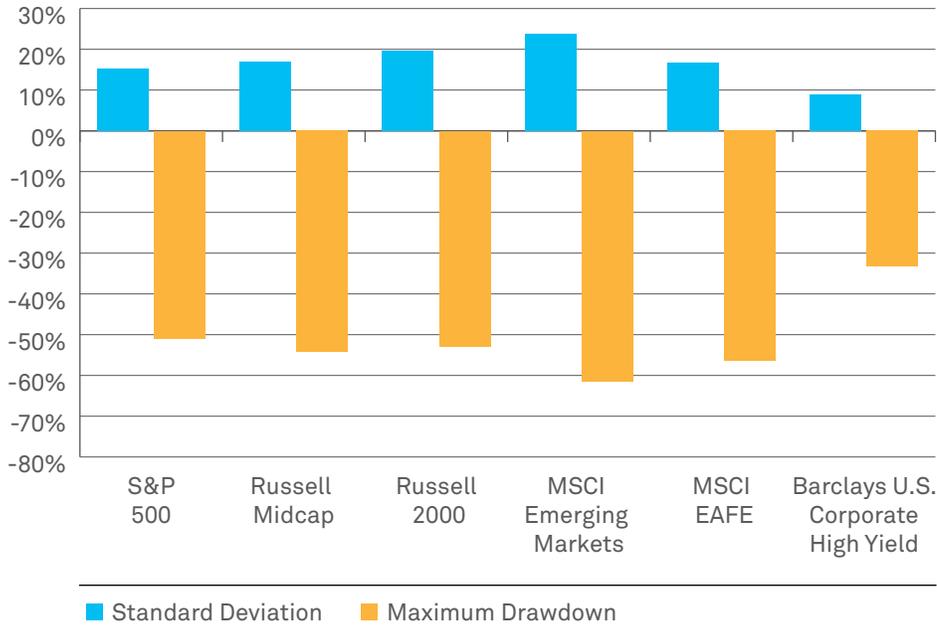
As of March 31, the coupon of the Barclays U.S. Aggregate Bond Index was 3.31%, considerably lower than it was at the beginning of most of the prior periods of rising yields. Thus, in the current environment, bond investors have little protection from the falling bond prices that occur as yields rise.

#### THE EQUITY VOLATILITY PROBLEM

Based on the experiences of the past 30 years, bond investors face an unusual problem: low yields and prospective returns. Meanwhile, equity investors are contending with a familiar problem: volatility.

The bear market of 2008-09 exposed a nerve that is still raw, and many investors are understandably wary of increasing their equity exposure. Volatility and significant drawdowns are characteristic of equity markets and even some fixed-income sectors with equity-like characteristics, such as high-yield corporate bonds. Over the past 20 years, equity volatility ranged from roughly 15% for the Standard & Poor's 500 Index to almost 24% for the MSCI Emerging Markets Index (Exhibit 2) and equity markets experienced maximum drawdowns of more than 50%.

Exhibit 2. Volatility Across Indices (April 1994 – March 2014)



The goal of a long and short portfolio is to tactically reduce market exposure, or beta, while capturing the relative performance, or alpha, of the manager's long and short equity decisions.

Source: Zephyr StyleAdvisor.

Geographic diversification across equity markets does not significantly reduce risk, and its benefits can be diminished by high levels of market volatility. Exhibit 3 illustrates the correlation of different market capitalizations in the U.S., international equities, emerging-market equities and high-yield corporate bonds to the S&P 500 over the past 20 years.

Exhibit 3. Correlations Increase When Markets Are Volatile

	Mid Cap	Small Cap	Int'l	EM	HY Corp	Long/Short
Volatile Markets (Oct 07 - Mar 09)	0.97	0.96	0.92	0.84	0.82	0.68
Apr 94 – Mar 14	0.93	0.81	0.83	0.73	0.62	0.67

Source: Zephyr StyleAdvisor. Correlations shown are for Russell Midcap, Russell 2000, MSCI EAFE, MSCI Emerging Markets, Barclays U.S. Corporate High Yield, and Dow Jones Credit Suisse Long/Short indices. All correlations are relative to the S&P 500 Index.

As shown in Exhibit 4, the historical returns of long/short equity strategies have been comparable to or even better than those of long-only strategies, with considerably less risk.

As you can see, correlations are normally high, ranging from 73% for emerging markets equities to 93% for U.S. mid-cap stocks. High-yield corporate bonds were also moderately correlated with U.S. large-cap equities at 62%. As the market dropped and volatility rose from 2007 to 2009, these correlations increased even more, reducing any benefits derived from diversifying across equity markets, just when they were needed most.

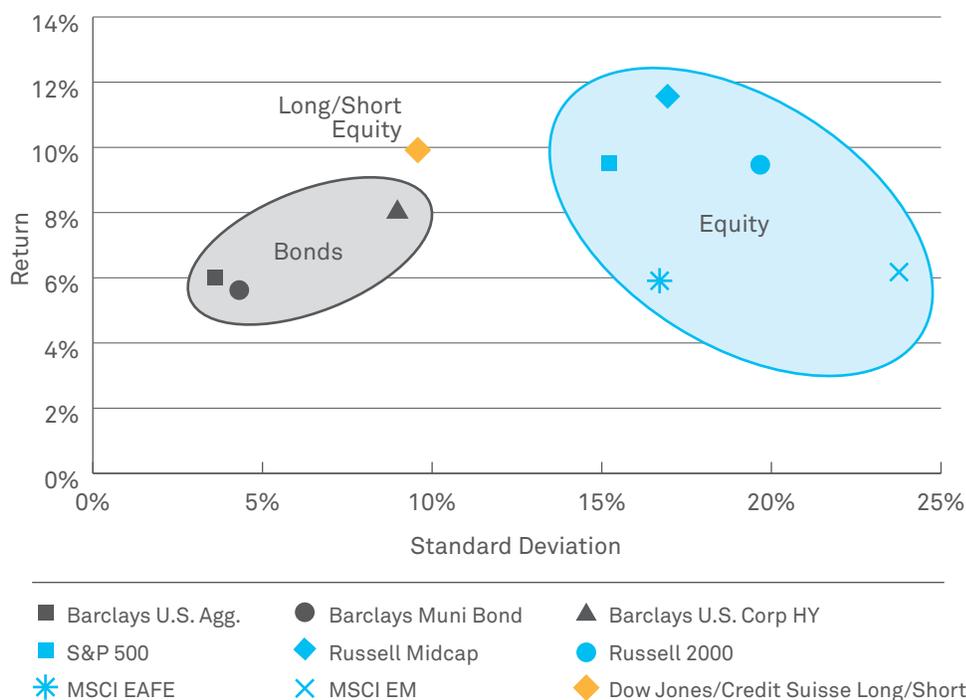
### ENTER LONG/SHORT EQUITY

Long/short equity strategies are not new, but have generally been available only in hedge-fund form, appealing to institutional and high-net-worth investors. Long/short investing expands the opportunity set of equity managers by removing the long-only constraint, allowing managers to purchase equities they believe will outperform and sell short equities that they believe will underperform. The goal of a long and short portfolio is to tactically reduce market exposure, or beta, while capturing the relative performance, or alpha, of the manager’s long and short equity decisions.

As the risk management needs of the retail universe have evolved over the past several years in pursuit of alternative strategies that seek to produce attractive returns with a moderate amount of risk, we have seen a significant proliferation of the retail, liquid-alt mutual fund Long/Short equity asset class – with good reason.

As shown in Exhibit 4, the historical returns of long/short equity strategies have been comparable to, or even better than, those of long-only strategies, with considerably less risk.

**Exhibit 4. Risk/Return (April 1994 – March 2014)**



Source: Zephyr StyleAdvisor.

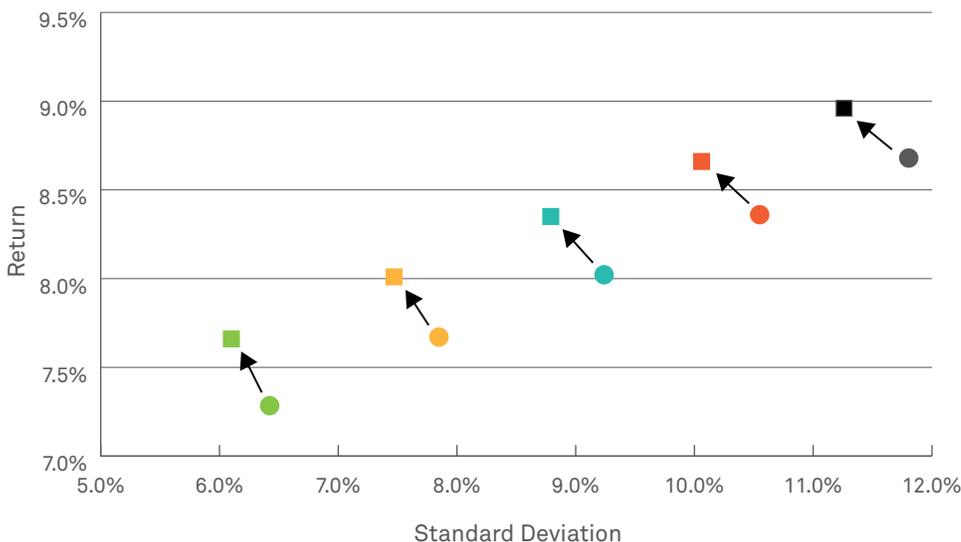
By allowing managers to exploit a larger opportunity set while reducing market exposure, long/ short equity has generated compelling risk-adjusted returns, using instruments and markets that give investors the ability to readily access their capital.

### THE PORTFOLIO BENEFITS OF LONG/SHORT EQUITY

We believe the prospect of achieving equity-like returns and lower volatility makes long/short equity an attractive addition to balanced bond and equity portfolios. By reducing equity and fixed-income exposure and adding long/short equity, investors may lower their total portfolio risk, and increase return, as illustrated in Exhibit 5.

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**Exhibit 5. Risk/Return With and Without Long/Short Allocations**  
(April 1994 – March 2014)



- Equity 70 Bond 30
- Equity 60 Bond 40
- Equity 50 Bond 50
- Equity 40 Bond 60
- Equity 30 Bond 70
- Equity 62.5 Bond 22.5 L/S 15.0
- Equity 52.5 Bond 32.5 L/S 15.0
- Equity 42.5 Bond 42.5 L/S 15.0
- Equity 32.5 Bond 52.5 L/S 15.0
- Equity 22.5 Bond 62.5 L/S 15.0

Source: Zephyr StyleAdvisor. Equity: S&P 500 Index; Bond: Barclays U.S. Aggregate Index; L/S: Dow Jones/Credit Suisse Long Short Index.

For example, comparing a portfolio that contains a mix of 40% bonds and 60% equities to one that has a 15% increased allocation to long/short equity, shows an increase in historical returns from 8.36% to 8.66% and a decline in total portfolio volatility from 10.55% to 10.06%. These benefits were also apparent at varying mixes of stocks and bonds and were based on a bond return of 5.80% for that period. With prospective bond returns at significantly lower levels, we believe the potential return advantage of adding long/short equity to balanced portfolios would be even greater, while also having the potential to reduce total portfolio volatility.

### **SELECTING THE APPROPRIATE STRATEGY**

The universe of long/short equity strategies is made up of a myriad of investment approaches, constraints and risk/return characteristics. However, many funds in the long/short universe and equity hedge funds more generally are highly correlated to the broad equity market. In fact, this correlation has been rising over time and is now close to its highest level in 20 years. Although investors in long/short strategies that mimic the equity market may earn attractive returns in a rising market, they could experience significant drawdowns in times of equity-market weakness or high volatility. Investors need to examine the level of market correlation in a given strategy to evaluate whether it provides adequate downside protection.

The primary benefit of long/short equity – equity-like returns with lower risk – is available to strategies that can produce returns predominantly by taking idiosyncratic risk rather than market risk. These strategies mainly generate alpha from their ability to identify winners and losers in their long and short exposures, making them less susceptible to weak equity markets than those with significant market risk. This ability to reduce downside volatility while generating positive returns is what makes long/short equity an attractive addition to a traditional portfolio of equities and fixed income.

### **CONCLUSION**

Allocations to long/short equity strategies can provide investors with the potential to increase their returns and reduce their total portfolio risk, compared with a long-only equity and fixed-income approach. Long/short solutions help solve for the dual problems of low fixed-income returns and high equity-market volatility, making this seem like an optimal time for this liquid alternative strategy.

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