

January 31, 2012

## *What color is your parachute?*

Why bonds might not be as defensive as you think

Bonds are the parachutes of the investment world; they have offered safe, stable income and their prices generally go up when everything else goes down, giving them a nice defensive quality in portfolios. Falling interest rates are the wind that keeps the parachute open and the greater the duration (interest rate sensitivity), the softer the landing. However, the very factor that makes them such an attractive hedge against a deteriorating economy and equity market transforms the parachute into a source of instability in a zero interest rate environment. The traditional toggle between stocks and bonds to dial up and down risk in a portfolio has been rendered ineffective. Today, migrating into strategies that deliver stable returns and principal safety yet have performance drivers that are largely independent of interest rate risk (and credit

spreads) is an essential part of building a defensive portfolio.



Investors are naturally risk averse and are supposed to get paid something in exchange for taking risk. If they didn't, they would just as soon put their money into cash or under the

mattress. This relationship is the premise for much of how the investing world is supposed to work (and is the basis of the familiar capital markets line depicted in figure 1). It's an intellectually seductive concept and

*'Investors who fled the perceived risk of equities into the . . . low volatility arms of bonds during the Great Depression. . . experienced a peak-to-trough real drawdown. . .exceeding 67%'*

investors have come to expect it to be true. It also has some historical basis; risky assets have risen more than bonds in every 30-year period since 1861, but one.<sup>i</sup>

Understandably, it doesn't always pan out in the short run (after all, it's the uncertain outcome that makes them risky). However, in the past 10, 20 and 30-year periods (ending December 2011), the relationship has not held either. The actual relationship between risk and return during these periods looks more like figure 2.

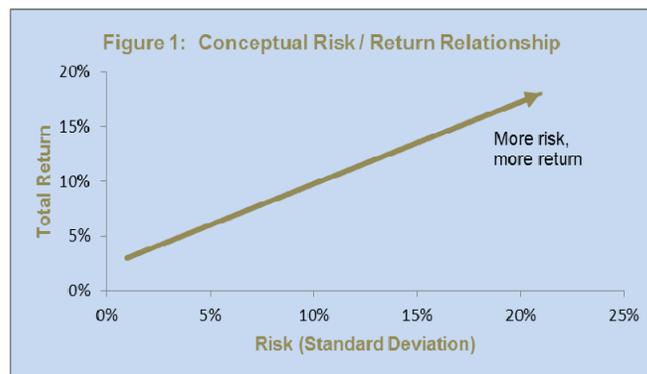
Our point is not to disprove the fundamental relationship between risk and return. To the contrary, it is alive and well. Widely accepted ways of measuring risk simply do a poor job of showing it. Risk encompasses the multitude of scenarios an investment could deliver, not the single path that ends up being measured afterward. In other words, volatility, standard deviation (and the many ways they are sliced and diced in risk management models) tells us what has happened, not what might have happened or could happen in the future.

In fact often times, the lower the volatility an investment exhibits, the greater the risk it carries (and vice versa). During turbulent times, investors buy assets they perceive to be safe (driving their prices up and making them riskier, all the while causing volatility to fall) and sell assets they perceive to be risky

(driving their prices down to a point that makes them safe, while volatility goes through the roof). This is the basis of Warren Buffet's advice "be fearful when others are greedy and greedy when others are fearful." And this brings us back to bonds.

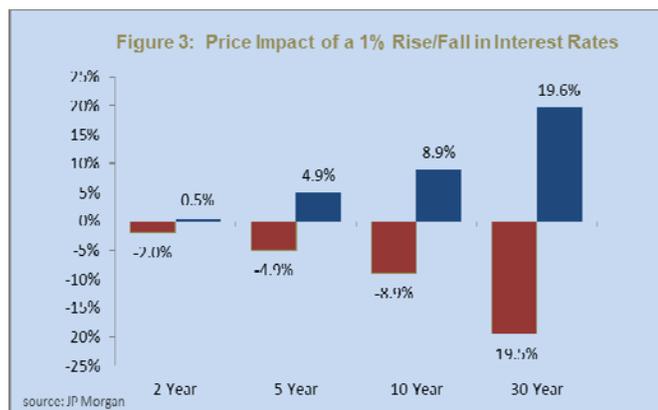
There is always a trade-off between the return sacrifice and diversification benefit a strategy brings to a portfolio. Long-dated bonds and treasuries in particular, have demonstrated strong diversification benefits in portfolio construction because of their negative correlation to other asset classes, like equities. This is in large part due to two factors: the interest rate factor that is negatively correlated with recessionary forces (including deflation) that drag other asset classes down and the safe haven status that is, well, positively correlated with fear. However, that correlation characteristic between treasuries and equities has been unstable over longer periods of time, vacillating between strongly positive and strongly negative since 1930.<sup>ii</sup>

From a performance perspective, bonds have carried their weight in portfolios as well. In the 30-year period ending December 2011, long-term bonds have returned 11.5% a year on average, beating the S&P 500 by 0.7%. In 2011 alone, long-



term treasuries delivered a whopping 34%, while riskier assets foundered (emerging markets equities fell more than 18% for instance). So far so good!

However, these returns belie a certain coiled-spring nature that bonds have. As we have said, bonds are exposed to interest rate risk and the greater a bond's duration, the greater the sensitivity to that risk. Perhaps more importantly given the current interest rate environment, the more rates fall, the more that risk rises *exponentially*. In other words, last year's explosive treasury performance on the back of a relatively small drop in rates (just 1%) reflects the high-octane nature of



this relationship and just how dangerously 'wound' bonds are right now (see figure 3). Investors who fled the perceived risk of equities into the 'safe,' low volatility arms of bonds during the Great Depression know this all too well. From December 1940 through August 1981, they experienced a peak-to-trough real drawdown on US bonds exceeding 67%.<sup>iii</sup> So much for safety, stability and defense.

While we aren't making any predictions about which way interest rates are headed, we are making a strong statement about the return sacrifice relative to the

diversification benefits of bonds today. That is, given the multitude of scenarios that could play out from here, there are safer alternatives to interest-rate sensitive bonds to diversify the defensive part of portfolios.

Parachutes serve one purpose: to protect against a hard fall. Likewise, bonds should not be considered sufficient portfolio defense in all market environments. As we discussed in our previous letter, at Rain, we decompose strategies by risk factors. We deliberately select strategies on the defensive end of portfolios that are diversified by those risk factors. We use tools on the bond side that allow for far greater flexibility to manage exposure to interest rate and credit spread risk as well as non-fixed-income-centric strategies whose returns are largely independent of interest rate risk and safe-haven volatility. This allows us to build more dependable and truly diversified qualities into the defensive side of client portfolios.

Chris Abbruzzese

David Reichle

Ellen Kim

<sup>i</sup> "Say What? In 30-Year Race, Bonds Beat Stocks," Cordell Eddings, Bloomberg, Oct 31, 2011

<sup>ii</sup> Portfoliosolutions.com

<sup>iii</sup> Credit Suisse Global Investment Returns Yearbook 2011

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