Rick Ferri Blog

As a Forbes columnist and author of six investment books, Rick Ferri is a leading expert on low-cost index fund investing. He is also the founder of Portfolio Solutions, one of the country's most successful low-fee investment management firms.

The Center of Gravity for Retirees

February 6, 2015 By Rick Ferri

Peter Bernstein wrote The 60/40 Solution in 2002. His seminal article laid out arguments for why 60% stocks and 40% bonds is the "ideal asset allocation" for long-term investors. He considered this allocation the "center of gravity" on a risk and return spectrum.

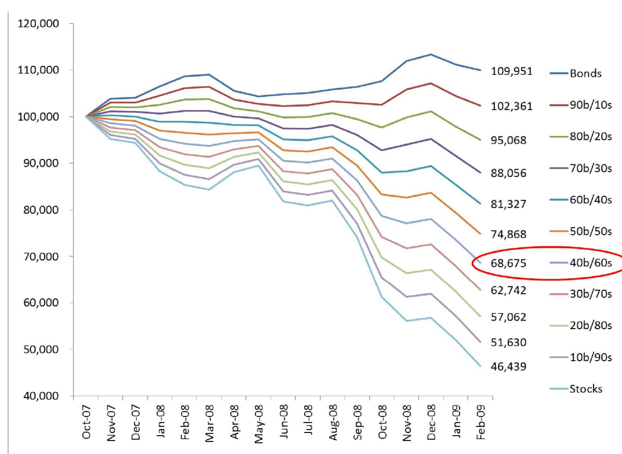
Bernstein's observation is timeless advice for many investors, but not everyone. The 60/40 mix is a solid starting point for a discussion about asset allocation for investors who are accumulating assets for retirement. However, it may not be the right starting point for someone living off their savings because the returns can be too volatile.

I believe the center of gravity shifts when a person stops accumulating assets and starts taking income from their assets. The corrected ideal asset allocation for beginning a discussion on asset allocation with a pre-retiree or retiree is 30% stocks and 70% bonds.

Stocks are claims on future earnings and deserve a higher risk premium than bonds that pay a known interest rate and return principal at maturity. Uncertainties surrounding future earnings make stock prices much more volatile than bonds and can result in bear markets that last several years. Investors who are working and accumulating assets can weather these periods of uncertainty and benefit from a higher allocation to stocks. That's not the case with someone living off their investments.

A 60% stock and 40% bond portfolio fell by more than 27% in value during a 16-month period from November 2007 to February 2009. An investment of $100,000 fell to $73,746 assuming no fees, contributions or withdrawals. Assume $4,000 ($333.34/month) per year in withdrawals from this portfolio and the value of a retiree's account would have fallen to $68,675 (see Figure 1, noted as bonds (b) to stocks (s). Big hits to consumers' wealth caused many retirees to act emotionally by selling, adding salt to their wounds.

Figure 1: Terminal account values assuming various asset allocations from October 2007 to February 2009, assuming $4,000 per year in withdrawals, 5-year Treasury notes and total US stock market.



Source: Data from CRSP Total US stock index from DFA Returns database; 5-year Treasury note, rebalanced annually, $333.33 monthly withdrawals at the beginning of each month. Chart by Rick Ferri.

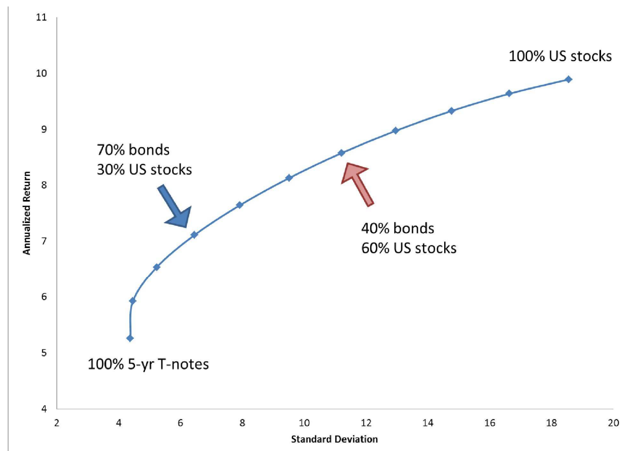
Investing is the balance between risk and return. A higher expected return infers higher risk. People who are accumulating for retirement tend to gravitate toward riskier asset allocations to reap higher expected returns. Most risk tolerance questionnaires are designed for this purpose, to find the maximum risk level an investor can handle. The outcome is then used to determine an asset allocation that is at the maximum risk level.

Retirees and those almost retired shouldn't care what their highest level of risk tolerance is because they shouldn't be investing anywhere near it. There is no economic reason for a person to take more investment risk than necessary once they've accumulated enough money for retirement. The focus should be on the minimum amount of risk needed to achieve an income required in retirement.

Pre-retirees and retirees don't have the same goal assumed by Peter Bernstein in his seminal 60/40 article. Their focus is on conserving wealth and generating income. This shifts the conversation to a different subject, which eventually shifts the center of gravity for the *ideal* allocation to something other than 60/40.

I propose the center of gravity for those who have accumulated enough for retirement to be 30% stocks and 70% bonds. This is a conservative mix that has enough equity to growth with inflation and enough fixed income to keep portfolio volatility at bay. Historically, a 30/70 allocation has earned the highest Sharpe ratio. This is the point on the efficient frontier that has earned the best risk-adjusted return as illustrated in Figure 2.

Figure 2: Efficient Frontier, 5-year Treasury notes and US stocks, 1926-2013, rebalanced annually

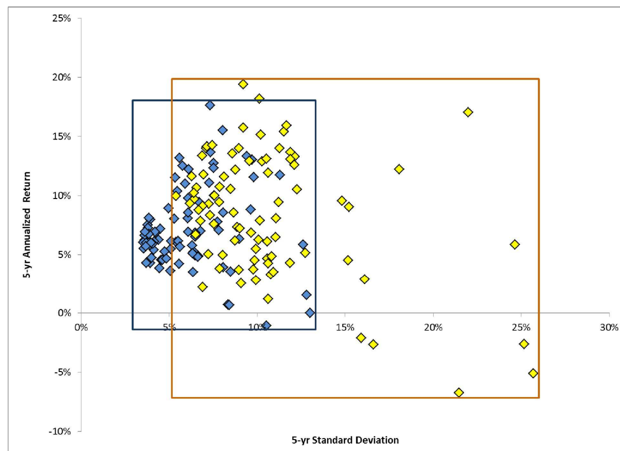


Source: 5-yr Treasury notes and CRSP US total stock market index from DFA Returns database. Efficient frontier chart by Rick Ferri.

A 30/70 allocation is attractive for several reasons. Relative to all bonds, it has generated about a 2% higher annualized return while the portfolio risk isn't uncomfortably high. In mathematical terms, the portfolio has achieved more rise (annualized return) than run (standard deviation). Contrast with the 60/40 portfolio that has more run than rise starting from the 30/70 allocation.

An interesting feature of a 30/70 portfolio is its resilience to losing money in down markets. Figure 3 illustrates the annualized rolling 5-year risk and returns of 30/70 portfolios (blue) compared to 60/40 portfolios (yellow). There was only one down period from 1928-1932.

Figure 3: Comparing 5-year risk and return portfolios for 30/70 (blue) and 60/40 (yellow)



Source: 5-yr Treasury notes and CRSP US total stock market index from DFA Returns database. Chart of portfolio returns and risks by Rick Ferri.

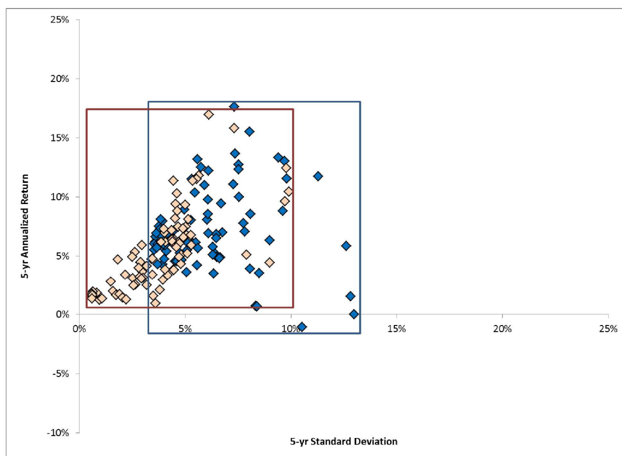
Figure 3 shows the 30/70 portfolios (blue) clustered in the left hand side of the chart while the 60/40 portfolios (yellow) are more scattered. This graph illustrates how unpredictable 60/40 portfolios are relative to 30/70 portfolios. The standard deviation (risk) of a 60/40 portfolio reached 26% in one period while the maximum risk of a 30/70 portfolio was only 13%, making it easier for a retiree to handle in a volatile market.

The boxes around the two portfolio types illustrate the range of risk and return outcomes over all 5-year periods. The 60/40 box (yellow) is three times the area of the 30/70 box (blue). This suggests a higher predictability of both risk and return for a 70/30 portfolio relative to a 60/40 mix.

Finally, there were five periods when higher volatility in 60/40 portfolios were accompanied by a losing annualized 5-year return. In contrast, 30/70 portfolios lost money only one time, as noted earlier. This is the type of consistency in returns retirees can become comfortable with.

Figure 4 compares the range of 5-year annualized risk and returns for 100% 5-year Treasury notes (red) and 30/70 portfolios (blue) from 1926-2013. The average risk was somewhat higher for the 30/70 portfolios, but the dispersion of risk was the same as determined by the width of each box. This infers the predictability of portfolio risk was the same for a 30/70 allocation as all 5-year Treasury notes.

Figure 4: Dispersions of risk and return, 100% bonds (red) and 30/70 portfolios (blue)



Source: 5-yr Treasury notes and CRSP US total stock market index from DFA Returns database. Chart of portfolio returns and risks by Rick Ferri.

Figure 1 shows the 30/70 portfolio dropped in value during the financial crisis due to stock market losses and withdrawals. From peak to trough, assuming $333.33 in monthly withdrawals, the portfolio value fell to $88,056, not including expenses. I believe this experience represents a more tolerable situation for retirees who need to balance safety and income with some equity for future growth.

As a matter of record, the market began to recover in March 2009. A 30/70 portfolio was solidly above $100,000 by September 2010, net of continuous $333.33 monthly withdrawals.

Of course, I'm speaking about the average investor and everyone is different. Some people will decide 30/70 is too conservative and move up the risk scale. Others may decide to move a bit lower in stocks. These adjustments are fully understandable and acceptable after a thorough assessment of safety needs, income, longevity and estate planning considerations in retirement.

Author's note: Peter L. Bernstein (January 22, 1919 – June 5, 2009) was a financial historian, economist, and educator who helped shape the beliefs of millions of investors with his timeless books and articles. His keen wit and eloquent style remains unmatched in the annals of financial literature.

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