Benchmakring the Performance of a Portfolio
Craig L. Israelsen, Ph.D.
June 24, 2008

Advisor Perspectives welcomes guest contributions. The views presented here do not necessarily represent those of Advisor Perspectives.

Life used to be simple. There was the S&P 500 Index, the MSCI EAFE Index, the Russell 2000 Index, and the Lehman Brothers Aggregate Bond Index. Benchmarking performance was simple, but crude.

Now there are literally hundreds of equity and fixed income indexes. (For the record, in the Morningstar database as of April 30, 2008 there were 235 indexes, and there are many others not in the Morningstar database). Benchmarking performance is complex, and now much more precise.

Interestingly, among those 235 indexes, only a handful represent a multiple-asset portfolio. How odd. It is the central role of advisors and planners to build diversified portfolios using stocks, funds, and exchange traded products from a wide range of asset classes. Yet, there are precious few “portfolio” indexes against which to benchmark the performance of a “portfolio”. How do advisors gauge the performance of portfolios in the absence of a reliable benchmark index?

The analysis below contrasts existing portfolio indexes and introduces a new index, the 7Twelve Index: a multi-asset global portfolio that uses 12 funds or exchange traded products to cover 7 asset classes.

Presently there are 5 multi-asset indexes in the Morningstar Principia database:

Dow Jones Conservative Portfolio
Dow Jones Moderately Conservative Portfolio
Dow Jones Moderate Portfolio
Dow Jones Moderately Aggressive Portfolio
Dow Jones Aggressive Portfolio

The 7Twelve Research Report
Craig Israelsen has published a 40+ page research report on the 7Twelve asset allocation model. The report contains detailed analysis and outlines several alternative versions of 7Twelve.

Click here for more information
The composition of each Dow Jones Portfolio is described in the appendix.

The risk and return characteristics of each Dow Jones Portfolio is shown in Figure 1. Just as theory would suggest, as risk increases (as measured by the worst 3-year annualized return over the 10-year period from 1998-2007) return also increases.

Also included in Figure 1 is the 7Twelve portfolio. It seems to defy theory. Its 10-year annualized return of over 11% (from 1998-2007) is associated with a worst 3-year return of nearly +6%. The S&P 500 Index is also included in Figure 1 as a reference point.

The year-to-year performance of each of the portfolio indexes, as well as the S&P 500 Index, is shown in Figure 2.

The 7Twelve portfolio is very straightforward. It does not employ exotic tactical strategies, and was not designed by an optimizer. It simply utilizes 12 broadly diversified funds in equal weighted allocations (actually 11 funds and one exchange traded note). At the start of each year, each fund is rebalanced back to 1/12 of the portfolio value. Tax-efficiency of the portfolio is maximized by using new cash inflows to accomplish the annual rebalancing. The 7Twelve portfolio is more diversified than most portfolios, including the Dow Jones Portfolios.

The 7Twelve portfolio utilizes the following asset classes: large cap US equity, midcap US equity, small cap US equity, non-US developed equity, non-US emerging equity, global real estate, natural resources, commodities, aggregate US bonds, inflation-protected bonds, non-US bonds, and cash.

Figure 1. Risk/Return: 10-Year Period from 1998-2007
10-Year Annualized Return

- 11%
- 12%
- 5%
- 6%
- 7%
- 8%
- 9%
- 10%
- 11%
- 12%

Worst 3-Year Annualized Return

- -20%
- -15%
- -10%
- -5%
- 0%
- 5%
- 10%
- 15%
- 20%
The 7Twelve portfolio is a model that can be turned into an investable product using mutual funds and/or exchange traded funds. For example, the weighted expense ratio of the 7Twelve portfolio as reported here is 0.69%. This implementation of the 7Twelve uses a mixture of actively managed funds and passive exchange traded products; a similar implementation using only passively managed products (ETFs and ETNs) has an expense ratio of 0.29%.

By comparison, the average annual expense ratio of “world allocation funds” (that is, funds that invest in a wide variety of global asset classes) is about 1.29%. So, the annual cost of the 7Twelve portfolio is about half the cost of the average
global allocation fund. The average expense ratio of all 3,354 funds that had a full 10 years of performance as of December 31, 2007 was 105 bps, or 1.05%.

For those who seek a higher standard for portfolio performance, the 7Twelve represents an ideal choice. It has produced stellar returns without subjecting the portfolio to annual losses over the past 10 years.
Appendix: (Morningstar descriptions of each Dow Jones Portfolio)

**Dow Jones Conservative Portfolio Index:** A benchmark designed for asset allocation strategists who are willing to take 20% of the risk of the global securities market. It is a total returns index that is a time-varying weighted average of stocks, bonds, and cash. The DJConsPI is the efficient allocation of stocks, bonds, and cash in a portfolio whose semideviation is 20% of the annualized 36 month historic semideviation of the Dow Jones 100% Aggressive Portfolio Index (DJAggPI). Stocks are represented by the DJAggPI. Bonds are represented by an equal weighting of the following four bond indexes with monthly rebalancing: Lehman Government Bonds Index, Lehman Corporate Bonds Index, Lehman Mortgage-backed Bonds Index, and Lehman Majors (ex U.S.) Bonds Index. Cash is represented by the 91-Day T-Bill Auction Average.

**Dow Jones Moderately Conservative Portfolio Index:** A benchmark designed for asset allocation strategists who are willing to take 40% of the risk of the global securities market. It is a total returns index that is a time-varying weighted average of stocks, bonds, and cash. The DJModConsPI is the efficient allocation of stocks, bonds, and cash in a portfolio whose semideviation is 40% of the annualized 36 month historic semideviation of the Dow Jones Aggressive Portfolio Index (DJAggPI). Stocks are represented by the DJAggPI. Bonds are represented by an equal weighting of the following four bond indexes with monthly rebalancing: Lehman Government Bonds Index, Lehman Corporate Bonds Index, Lehman Mortgage-backed Bonds Index, and Lehman Majors (ex U.S.) Bonds Index. Cash is represented by the 91-Day T-Bill Auction Average.

**Dow Jones Moderate Portfolio Index:** A benchmark designed for asset allocation strategists who are willing to take 60% of the risk of the global securities market. It is a total returns index that is a time-varying weighted average of stocks, bonds, and cash. The DJModPI is the efficient allocation of stocks, bonds, and cash in a portfolio whose semideviation is 60% of the annualized 36 month historic semideviation of the Dow Jones Aggressive Portfolio Index (DJAggPI). Stocks are represented by the DJAggPI. Bonds are represented by an equal weighting of the following four bond indexes with monthly rebalancing: Lehman Government Bonds Index, Lehman Corporate Bonds Index, Lehman Mortgage-backed Bonds Index, and Lehman Majors (ex U.S.) Bonds Index. Cash is represented by the 91-Day T-Bill Auction Average.

**Dow Jones Moderately Aggressive Portfolio Index:** A benchmark designed for asset allocation strategists who are willing to take 80% of the risk of the global securities market. It is a total returns index that is a time-varying weighted average of stocks, bonds, and cash. The DJModAggPI is the efficient allocation of stocks, bonds, and cash in a portfolio whose semideviation is 80% of the annualized 36 month historic semideviation of the Dow Jones Aggressive Portfolio Index (DJAggPI). Stocks are represented by the DJAggPI. Bonds are represented by an equal weighting of the following four bond indexes with monthly rebalancing: Lehman Government Bonds Index, Lehman Corporate Bonds Index, Lehman Mortgage-backed Bonds Index, and Lehman Majors (ex U.S.) Bonds Index. Cash is represented by the 91-Day T-Bill Auction Average.

**Dow Jones Aggressive Portfolio Index:** A benchmark designed for asset allocation strategists who are willing to take 100% of the risk of the global securities market. It is a total returns index formed by equally weighing nine equity style indexes with monthly rebalancing. The nine equity style indexes include: Dow Jones U.S. Large Cap Value, Dow Jones U.S. Large Cap Growth, Dow Jones U.S. Mid Cap Value, Dow Jones U.S. Small Cap Value, Dow Jones U.S. Mid Cap Growth, Dow Jones U.S. Small Cap Growth, Dow Jones Emerging Markets LN, Dow Jones Europe/Canada, and Dow Jones Asia/Pacific. Beginning in 1980 and before 1/1/1992, the Dow
Jones Aggressive Portfolio Index (DJAggPl) is depicted by an index created for Dow Jones indexes by the quantitative group. This index contains all nine relevant equity asset classes equally weighted and rebalanced monthly.

www.advisorperspectives.com

For a free subscription to the Advisor Perspectives newsletter, visit:
http://www.advisorperspectives.com/subscribers/subscribe.php