What Investors Should Fear in the Permanent Portfolio

By Geoff Considine
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Over the last decade, the assets of the fund PRPFX have swelled from $50 million to more than $10 billion. The concept underlying that fund, Harry Browne's Permanent Portfolio (PP), has rewarded PRPFX investors with attractive risk-adjusted returns. Those investors, however, may want to rethink their exposure – especially if PRPFX is the core of a retirement-oriented strategy.

Browne laid out a very simple asset allocation model in his 1998 book, Fail-Safe Investing. The concept starts with the premise that there are four extremes in the economy and that a good portfolio will have components that will outperform in each one:

- Inflation: Gold and precious metals outperform
- Deflation: Bonds outperform
- Prosperity: Stocks outperform
- Recession: Cash outperforms

The PP invests 25% in each of these asset classes, a strategy easily accomplished using three ETFs and a money market fund:

Asset Class	Fund or Stock Ticker
Total Stock Market Index	VTI
Gold	GLD
Long Government Bonds	TLT
Cash	-

ETF Implementation of Permanent Portfolio

Long-term performance

William Bernstein wrote an excellent article in 2010 that reviewed the PP's performance since 1964. Neither ETFs nor index mutual funds existed for much of this period, so Bernstein used pure index data. For the 45-year period through 2009, the four-component PP, rebalanced annually, would have returned 8.5% per year, with annualized volatility of 7.7%. By comparison, a portfolio that was 60% allocated to a stock index, 20% allocated to long-term bonds and 20% allocated T-Bills would have returned 8.8% per year with annualized volatility of 11.3%.

In other words, while the 60/40 narrowly outperformed the PP, an investor was not effectively rewarded for the 46% higher volatility of the 60/40 portfolio. Considering portfolio volatility, the PP dramatically outperformed.

The mutual fund PRPFX broadly follows the PP concept. While this fund has a relatively high expense ratio of 0.82% considering its simple composition, its total returns have been impressive over the last decade and more. According to Morningstar, this fund had an annualized return of 11% over the 10-year period through January 2011 and 8.5% annualized return for the 15-year period. The S&P 500 returned 2.5% and 6.6% per year over these two periods, respectively.

The performance of the PP is largely uncorrelated to equities. PRPFX had a trailing 10-year beta of 0.32 and an R-squared with respect to the S&P 500 of 32%. Less than a third of the variation in returns for this fund from year to year was explained by the returns on equities. By comparison, a portfolio allocated 60% to the S&P 500 (VFINX) and 40% to a total bond market index (VBMFX) has a beta of 0.59 and R-squared of 98% with respect to the S&P 500.

Another important statistical feature of the PP is that it negatively correlates with interest rates, unlike a 60/40 portfolio. The 10-year correlation between the returns on PRPFX and the yield on 10-year government bonds is -19%, as compared to +16% for the 60% S&P 500 / 40% bond portfolio. Falling interest rates will correspond to better returns for PRPFX, and increasing interest rates will correspond to worse performance for PRPFX. Conversely, the 60/40 portfolio will deliver higher returns in a rising rate environment, and vice versa.

In fairness, however, PRPFX has never been tested against a regime of rising rates. Since it was launched at the end of 1982, we have seen a continuous long-term decline in interest rates.

Bernstein found that the PP (the four-asset-class model, as opposed to the PRPFX fund) performed very well during the very-high-inflation years from 1973-1981. This suggests that the PP will outperform in high-rate environments. Of course, a correlation of -19% to interest rates does not mean that that the PP will always suffer when rates rise, but simply that this is the broad tendency.

It makes sense that a portfolio that is 25% cash and 25% long-term government bonds will decline in value in a rising rate environment. The gold component of the portfolio could make up the difference, but returns from gold are also driven by its speculative nature. The fact that is gold now at near-record prices may play a larger role in its future returns than its correlation to interest rates.

Properties of the PP asset allocation

The PP is an example of a risk-parity strategy. Gold and long-term government bonds have low correlations to equities but also have volatilities that are very close to those of equity indexes.

	Portfolio	VTI	GLD	TLT
VTI	54%	100%		
GLD	75%	6%	100%	
TLT	53%	-20%	30%	100%

Correlations (Three years through Jan 2011)

We can immediately see why this portfolio outperformed portfolios that had similar risk but held only stocks and bonds in recent years. While a 60/40 portfolio has about 98% correlation to equity indexes, this portfolio has a 54% correlation to a broad equity index. In addition, the correlations among these three asset classes are very low. The highest correlation is between gold and long-term bonds. Over longer time horizons, this correlation tends to be even lower (as shown in Bernstein's historical analysis), but the outperformance of both bonds and precious metals in recent years has pushed this correlation up.

As I noted in a recent article, one of the most powerful ways to increase diversification benefits is to combine low-correlation asset classes that also have comparable volatility. The table below shows the trailing three-year volatility for the PP's three core asset classes, which are indeed remarkably similar:

Ticker	Trailing Volatility
VTI	23%
GLD	21%
TLT	18%

Historical Volatility (Three years through Jan 2011)

I ran the three-fund version of the PP through Quantext Portfolio Planner, my forward-looking asset allocation tool. Its expected return and expected volatility are shown in the table below, using data available at each of four dates: the end of January 2011, the end of January 2010, the end of January 2009, and the end of January 2008:

Date	Expected Return	Expected Volatility
January-11	6.1%	6.1%
January-10	6.4%	7.0%
January-09	7.1%	8.1%
January-08	8.3%	7.6%

Projected Risk and Return (End of January) for 2008, 2009, 2010 and 2011

The expected return and expected risk of the PP declined over the past four years by a considerable amount.

These results show that the PP has been well diversified since 2008. Its expected return and expected volatility as of the end of January 2008 were remarkably close to the long-term return and volatility Bernstein calculated for the period 1964-2009. If one can expect to generate 8.3% per year with a low volatility (7.6%), this is an attractive proposition, and the four-component PP has managed exactly that feat for a very long period of time.

The more worrisome question is why the expected return of the PP allocation has declined by more than 2% over the last four years. The answer, though, is quite simple: declining expected returns on gold and long-term bonds are to blame. At the end of January of 2008, the expected return for GLD generated by QPP was 14.5%. As of the end of January of 2011, the expected return for GLD declined to 8.0%. The expected return for long-term bonds (TLT) was 8.3% at the end of January 2008 but is only 7.0% today. The market also perceives less uncertainty in GLD's and TLT's future returns, so their expected volatility and returns are lower.

The Permanent Portfolio for long-term investors

The effective diversification among asset classes provides a high expected return for the level of risk in the PP, which makes it attractive. But does the PP make sense as the core of an investor's portfolio?

Two factors argue against using the PP for long-term investing – investing for retirement, for example. The first is the risk level of the portfolio. The PP is likely to be considerably more conservative than many investors will want or need. For retirement planning, investors need to find the right balance between keeping market risk exposure within acceptable limits and generating a sufficiently high return to provide for a long-term sustainable income in retirement. Just because the PP is a good portfolio for its risk level does not mean it has the right risk level and sufficient expected return for any specific investor. Specifically, the January 2011 projections for the PP (6.1% expected return with 6.1% volatility) would be well below what most analyses suggest as the basis for providing the highest sustainable returns from a retirement portfolio.

The second concern is that its returns have a negative correlation to interest rates. While this has boosted performance in recent years, the long-term prevailing trend is always inflationary. In addition, for investors saving for retirement, liabilities will tend to increase with inflation, and therefore have a positive correlation to interest rates. A portfolio allocation with a negative correlation to rates will decline in value when the costs of goods and services are increasing, and vice versa. As noted earlier, there is a positive correlation between a 60/40 portfolio and interest rates.

The case for and against the Permanent Portfolio

There are a number of very attractive features of the Permanent Portfolio. First, we have very impressive and theoretically sustainable long-term performance. A range of asset-

allocation studies (including my own) have found that a well diversified portfolio will have expected returns equal to expected volatility and the PP has shown average annual return equal to volatility over long periods.

Second, the rationale behind the PP allocation is well understood. It uses three major asset classes with low correlation to one another and comparable levels of volatility. The research in risk-parity supports the idea that this asset allocation has the potential for long-term outperformance.

There are, however, some potential problems with the PP. First, we have just seen a period when both long-term bonds and gold have substantially outperformed. Browne envisioned a world in which long-term bonds outperform in a *deflationary* period and gold outperforms in an *inflationary* period. What are we to make of the fact that gold has substantially outperformed in recent years in a deflationary environment? The trailing five-year annualized return of GLD is almost 20% per year. The long rallies in both government bonds and gold are a reflection of investors' fear of equity risk. We should not expect gold and bonds to move counter to one another in coming years. In other words, the PP has enjoyed an extended period that has been perfectly aligned for its outperformance, but that there is no reason to believe that we should expect this performance to continue.

The combination of an outperforming track record and solid theory provides a compelling narrative for the PP as a strategic asset allocation. The contrary point is that we are in a tactical environment that does not favor its continued outperformance, at least not at the level seen in recent years.

For investors whose primary goal is income in retirement, the primary concern is that the PP will not provide a long-term income stream that must keep up with inflation, especially given its negative correlation to interest rates.

Given today's environment, characterized by historically low interest rates, the PP, with its interest rate exposure, will not be an attractive portfolio in the coming years, and it is ill suited for retirement-oriented investors who require the ability to keep pace with inflation. Advisors should recognize PP's benefits, but they should also approach any such portfolio with caution in the current environment.

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