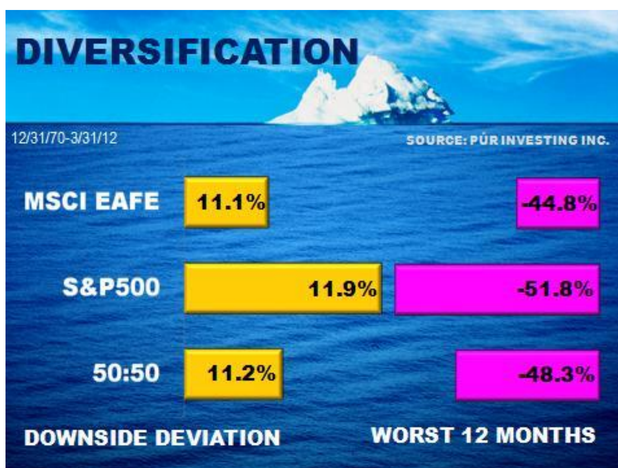
ADVANCED TRENDS IN PORTFOLIO CONSTRUCTION

Most advances in portfolio construction are to correct portfolio manager shortcomings. In my experience as a portfolio manager and as a manager of portfolio management teams, on balance, managers are negative alpha to the investment process. Approaches that minimize the opportunity for human error or behavioural bias are welcomed disciplines.

DIVERSIFICATION – VIEW FROM THE SURFACE

The traditional diversification benefits of higher return and lower risk are illustrated here. A monthly rebalanced portfolio consisting of 50% International stocks (MSCI EAFE) and 50% U.S. stocks (S&P 500) provided an annualized return that exceed both indices over the measurement period from December 31, 1970 to March 31, 2012 (6.9% combined vs. 6.6% and 6.7% individually). Similarly, the risk of the combined portfolio was lower than either of the indexes alone.



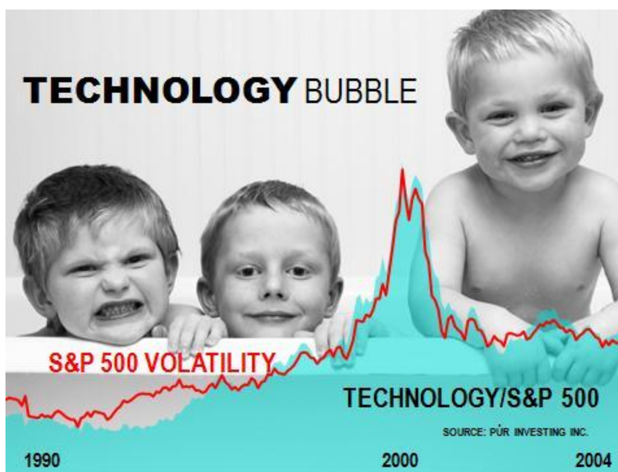
DIVERSIFICATION – VIEW FROM DOWN MARKETS

Diversification doesn't work as well in down markets. Downside deviation, a measure of negative return periods, shows the combined portfolio performing better than one index but not the other. More critically for retail investors, the worst twelve month period was the average between the two indexes, offering no benefit at all.

DIVERSIFICATION FAILS

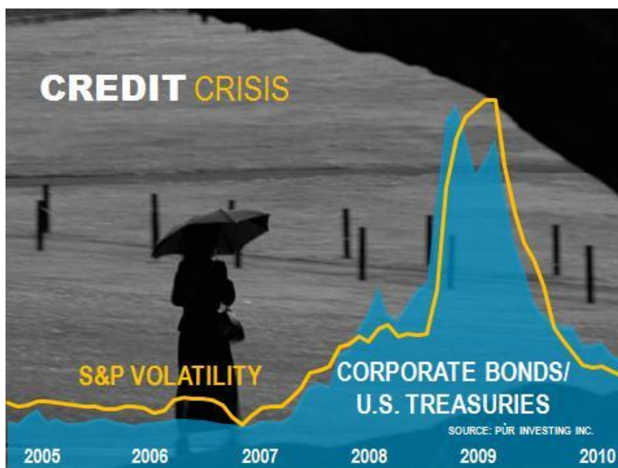
Diversification is the money manager's primary tool to control risk. Much talk from the financial crisis has been about the need for broader diversification including alternative investments. The reality is that under the stress of uncertainty, indicated by elevated levels of volatility, diversification is less effective.

A better approach is needed.



REBALANCING TO A FIXED ASSET MIX #1

Most investment managers of balanced portfolios have a policy asset mix (like 60% equities: 40% bonds) and rebalance to it. As the stock market moved sharply higher during the technology bubble (1997-2000), managers were selling stocks and buying other assets. While intuitively correct (selling high), portfolios had the same asset mix at the top of the bubble as they did before it started. The risk in the market, however, was clearly higher. Portfolios were exposed to extreme risk. Fine if you have time to skate back on side.



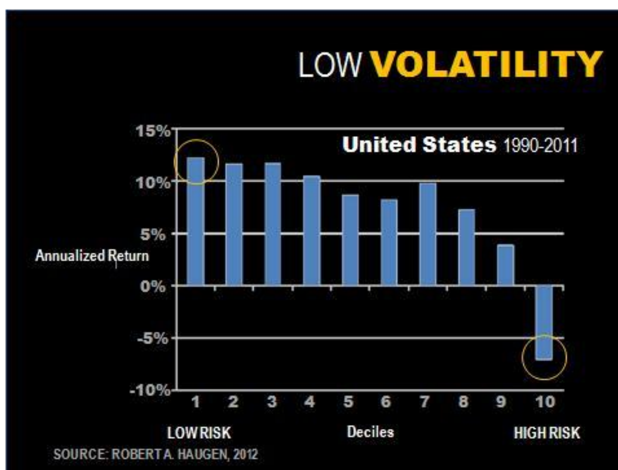
REBALANCING TO A FIXED ASSET MIX 2

During the credit crisis, volatility indicated what the expanding spread of corporate bonds over U.S. Treasuries was saying, something was wrong.

Volatility, in these cases the 252 day (1 year) moving average of S&P 500 standard deviation, was sensitive to imbalances in capital markets, both equity and fixed income.

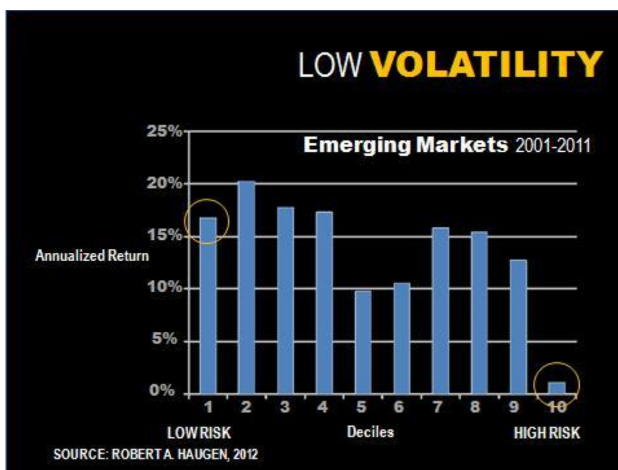
REBALANCING TO A FIXED ASSET MIX 3

We suggest that markets seem friendlier to investments when volatility is stable or falling and less friendly when it is rising.
A simple stock-cash example showed that returns were better and risk was substantially lower. Importantly for advisors, the worst 12 month performance of the consistent risk portfolio was substantially better than the S&P 500 alone. All hypothetical results are based upon historical volatility. No projections required.



LOW VOLATILITY STRATEGIES: U.S. EQUITIES

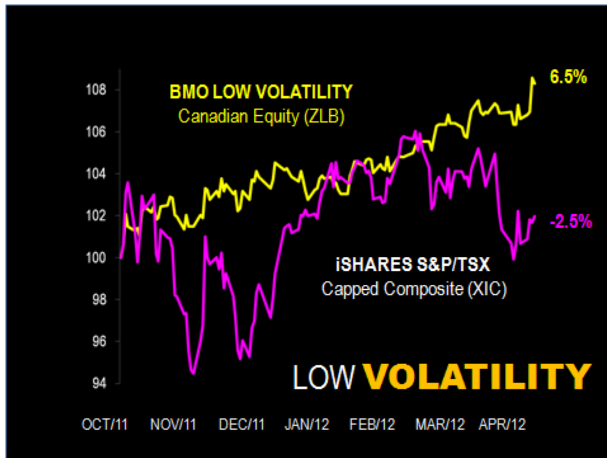
U.S. financial economist Robert Haugen measured the 24 month volatility of U.S. stocks from 1990-2011 and put them into deciles from low risk (left) to high risk (right) and plotted their annualized returns as shown in the chart. He repeated this calculation monthly over the testing period. A relatively uniform relationship between low volatility and higher returns was the result. This is a surprising result if you believe that risk equals return.



LOW VOLATILITY STRATEGIES: EMERGING MARKETS

Haugen also measured the 24 month volatility of emerging market stocks from 2001-2011 and put them into deciles from low risk to high risk and plotted the returns. He repeated this calculation monthly over the testing period. The relationship between low volatility and higher returns was not as uniform as in the U.S. but you can see it if you squint!

The frequency of the rebalancing (monthly) influences the results but losing less money during volatile periods is the key.

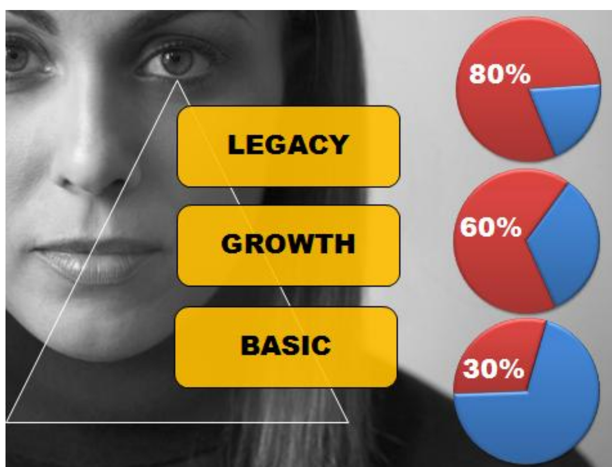


LOW VOLATILITY

In Canada, BMO and Powershares have issued low volatility ETFs using different methodologies. The BMO Low Volatility ETF (ZLB) is shown in the chart with iShares S&P/TSX (XIC) since late October 2011. ZLB avoided two spikes in market volatility, one in November-December 2011 and another in April 2012. ZLB is actually a low beta ETF that measures sensitivity to market movement, a component of volatility. The Powershares S&P 500 Low Volatility (ULV) ETF is based on a more traditional calculation of volatility. The Powershares S&P 500 High Beta (UHB) uses beta as the volatility measure like BMO.

MATCHING CLIENT RISK TOLERANCE TO PORTFOLIOS

Setting a strategic asset mix, like 60% equities and 40% bonds, and periodically rebalancing to it may be fine if you have a long investing time horizon like most pension funds and balanced mutual funds. However individual investors have investing horizons that are shrinking every day. Rebalancing to a fixed asset mix periodically exposes these investors to market risk higher than they expected or need. ETFs, with built in diversification, are ideal risk building blocks to construct more suitable portfolio strategies.



MATCHING CLIENT GOALS TO A PORTFOLIO

If clients apportion their assets by goal, they will see that the final portfolio's asset mix relates directly to their needs. "Basic" refers to food, clothing and shelter, with which little risk can be afforded. "Growth" is for lifestyle enhancement and has a longer investing time horizon. "Legacy" is for philanthropy and inheritances to children or grandchildren and involves the longest time horizon. In this example using equity exposures, extending client weights may result in something like a 60:40 asset mix, but clients can appreciate the connection between their goals and the strategic mix.

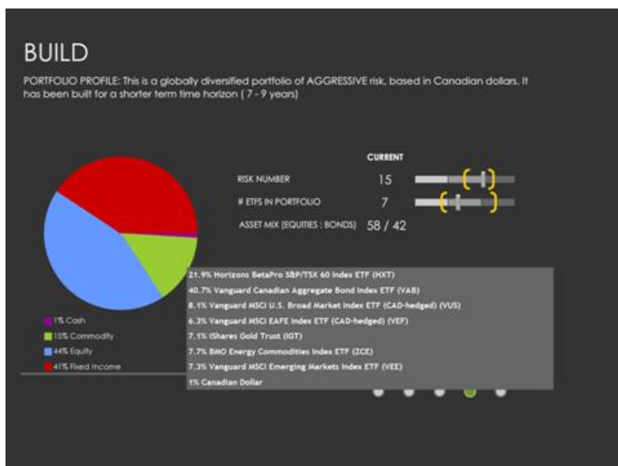
BUILDING A RETURN FLOOR

While using asset mix can help investors understand how a portfolio is devised, using risk numbers can be even more useful. For low risk Basic needs, a “5” means managing to a five year time horizon with the theoretically minimum expectation of return of all capital plus inflation with a 95% probability. Not 100% but pretty good. The maximum 12 month downside would be -5% with a 99.863% probability. Again, not perfect but a source of confidence. Similar time horizons and downsides apply to Growth and Legacy. The result is a portfolio with a return floor from which to build.

CONTROL VOLATILITY

By using volatility effectively, portfolio risk can be tempered and exploited. Building a return floor underneath a portfolio can provide protection and a soft landing.

Building a portfolio that reflects the needs of an investor and rebalancing to maintain a consistent risk is prudent. ETFs allow advisors to do this in ways previously unavailable.



ETF PORTFOLIO CONSTRUCTION TOOL

Qualified advisors are welcome to test drive the beta version of PŮR’s ETF Construction Tool that uses constant volatility rebalancing. Enter client risk tolerance, time horizon, knowledge, and portfolio size and the optimizer will generate a portfolio from the list of ETFs you select from the embedded ETF Screener, like the one available on the TMX Money website.
http://www.tmxmoney.com/en/sector_profiles/exchange_traded_funds/screener.html
For more information contact Mark Yamada:
myamada@purinvesting.com