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WHY 60/40 IS NOT DIVERSIFICATION

> "The question to examine is whether the give-up of return is justified by the diversification received."

How “alt thinking” can help you achieve better investment outcomes

The challenge is to capture the full diversification benefit: to reduce portfolio risk without reducing expected returns.

If your investment objectives have become more defensive in light of a late-cycle equity market and the risk of rising interest rates, you may want to explore whether a traditional 60% Equities / 40% Fixed Income portfolio offers you the kind of diversification that meets your expected investment outcome.

Most investors understand that portfolio diversification is enhanced when three objectives are met:

1. **Volatility (as measured by standard deviation) is lower;**
2. **Correlation between asset classes in the portfolio is lower, and;**
3. **Returns are sufficient to meet an investor’s objectives.**

The problem with the traditional 60/40 portfolio is that, in today’s markets, it has difficulty meeting all three of these objectives — It leaves the investor exposed to the possibility of either insufficient returns or higher portfolio risk.

Asset allocation is challenging and finding innovative ways to reduce risk without reducing returns has long been the pursuit of institutional investors. It is time for retail investors to approach their portfolios in the same way.

Beyond 60/40

An investor who focuses solely on the magnitude of returns without regard to risk would own a portfolio of equities alone. However, for most investors, this results in exposure to an unacceptable risk of loss. Equity markets can experience sudden and large losses. The S&P 500 fell approximately 50% from peak to trough in the 2007-2008 financial crisis.

At the other extreme, an investor focused solely on risk reduction would own a portfolio of guaranteed assets and government-backed securities — likely limiting returns to under 2% per year in today’s interest rate environment.

The first step for the “alt thinking” portfolio manager is the capture of the full diversification benefit: that is, to reduce portfolio risk without reducing expected returns.

In Pursuit of Optimal Risk-Adjusted Returns

To illustrate this, we use 30 years of historical returns to compare a 100% equity portfolio to two different portfolios:

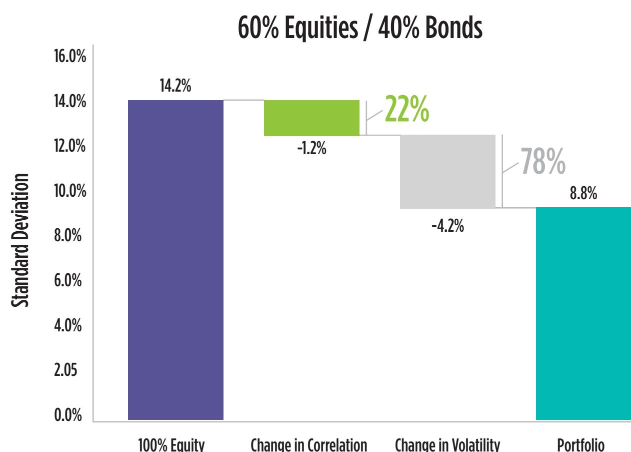
1) **a traditional 60/40 portfolio**, and;

2) **a portfolio that introduces both an alternative asset plus an alternative investment strategy**.

Portfolio 1: 60% Equities, 40% Bonds

By adding 40% bonds to an equity portfolio we can reduce the overall portfolio risk of 14.2% (100% equity portfolio, in purple on the left below) by 61% to 8.8% (a 60/40 portfolio, in teal on the right), which reduces portfolio return by 18% from 10.4% to 8.8% (see table below). The question to examine is whether the give-up of return is justified by the diversification received.

Using the calculations defined in the box below, it can be seen that *78% of the risk reduction* in the 60/40 portfolio is achieved because bonds have a much lower volatility than equities (3.6% vs 14.2%). *Only 22% of the risk reduction* is due to the correlation differences between bonds and equities. That is to say, bonds and equities exhibit higher correlation than may be expected. If equity markets were to drop, based on the data below, bonds would be adversely affected as well. Therefore, the portfolio would not necessarily be as well buffered from adverse market conditions as the investor might be hoping for. The best portfolio diversification demonstrates more of a balance between the measures "change in correlation" and "change in volatility".



Portfolio 1	Annual Return	Standard Deviation
100% Equity	**10.4%**	14.2%
100% Bonds	5.9%	3.6%
60% Equities + 40% Bonds	**8.8%**	8.8%

Source: Morningstar Direct. Equity represented by S&P 500 TR USD, Bonds represented by Bloomberg Barclays US Aggregate Bond TR USD; January 1990 – December 2018

Quantifying the Diversification Effect*

The correlation of returns lies at the heart of the diversification effect. When we diversify, we attempt to reduce risk by combining assets that have as low a correlation as possible without sacrificing too much return.

When two assets are perfectly positively correlated, the total risk of the portfolio is the weighted sum of the individual risks. To determine the diversification effect, we compare *actual* results against the results of a theoretical *perfectly* correlated portfolio.

In our 60% equities/40% bonds portfolio, for example, equities have a volatility of 14.2% and bonds, 3.6%. If they were perfectly correlated, the volatility of a 60/40 portfolio would be: (14.2 x 60%) + (3.6 x 40%) = 8.52 + 1.44 = 10.0% (rounded to one decimal place).

Based on 29-year historical data, we know that the volatility of the *actual* portfolio is 8.8%, or a difference of **1.2** percentage points from the perfectly correlated portfolio (10.0– 8.8 = **1.2**). Of the total 5.4 point reduction in volatility which comes from adding 40% bonds to an all-equity portfolio (*see graph to left:* 14.2 – 8.8 = 5.4), **1.2** points of that reduction can be attributed to a reduction in the portfolio's *correlation*. The remaining **4.2** point reduction is due to the difference in *asset volatilities* and will likely act as a drag on returns.

* For illustrative purposes only

Portfolio 2: 40% Equities, 20% Bonds, 25% Long-Short Equity, 15% Gold

In the second scenario, the "Alt Thinking" manager decides to add an alternative strategy (long-short equity) and an alternative asset (gold).

The long-short equity strategy takes long positions in stocks that are expected to appreciate and short positions in stocks that are expected to decline. The addition of gold to the portfolio is frequently observed among institutional investors who value the inflation protection qualities of the asset class.

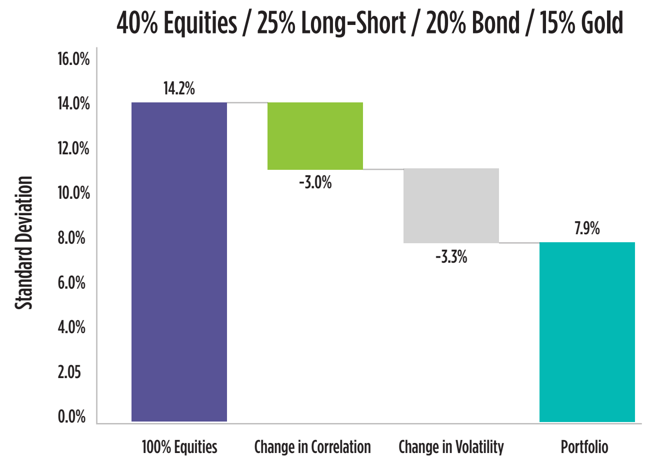
In the new portfolio, the diversification effect looks much better because the selected asset classes are *less correlated* while the *magnitude* of their volatilities are better matched to equities. Matching offsetting volatility magnitudes can be beneficial to smoothing out a portfolio's performance across market cycles.

The change in correlation at -3.0% is now very close to the change in volatility at -3.3%. The standard deviation of the portfolio is lower than the 60/40 portfolio at 7.9% (vs 8.8%), and the portfolio return is slightly ahead of the 60/40 portfolio.

In this case, reducing the bond exposure by half in Portfolio 2 also has the benefit of reducing potential losses should bond yields rise. This alternative portfolio is a better diversified portfolio than the 60/40 portfolio presented on the page before.

Indeed, the Sharpe Ratio (used to help investors understand the return of an investment compared to its risk) for the traditional 60/40 portfolio shown here is 0.92, while that for the alternative portfolio is higher at 1.02, meaning it delivers better risk-adjusted returns to the investor.

While this portfolio is hypothetical and may not be suitable for all investors, it demonstrates how exploring the inclusion of alternative assets and/or strategies in a portfolio can deliver an outcome that may be more aligned with the goals of an investor: better diversification, lower volatility, and reasonable returns.



Portfolio 2	Annual Return	Standard Deviation
100% Equity	**10.4%**	14.2%
100% Long/Short Equity	11.3%	8.7%
100% Bond	5.9%	3.6%
100% Gold	5.2%	15.4%
40% Equities / 25% Long-Short 20% Bonds / 15% Gold	**8.9%**	7.9%

Source: Morningstar Direct. Equity represented by S&P 500 TR, Long-Short Equity by HFRI Equity Hedge (TOTAL), Bonds by Bloomberg Barclays US Aggregate Bond TR, and Gold by S&P GSCI Gold TR, all USD; January 1990 - December 2018.

The Advantages of "Alt Thinking"

By integrating uncorrelated and non-traditional assets and/or strategies into a portfolio, an investor may be able to achieve a greater diversification benefit than a traditional 60/40 portfolio provides and, ultimately, better risk-adjusted returns. It is up to the skill of the portfolio manager, then, to lower risk in a portfolio, preserve returns, and narrow the range of investment outcomes to those best suited to the investor's objectives and risk tolerance.

"Alt Thinking" brings investors a higher degree of confidence that, come the next downturn, their portfolios will preserve sufficient value to meet their future cashflow requirements, and will be positioned to benefit from the next upswing in the return cycle.

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