RISK AND RETURN, A DYNAMIC DUO

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7Twelve™ Portfolio

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Risk and Return, a Dynamic Duo

Raw performance grabs headlines, but highlighting the benefits of diversification is wiser for those who react poorly during volatile periods.

BY CRAIG L. ISRAELSEN

IT'S SAFE TO ASSUME YOUR CLIENTS WANT BETTER portfolio performance with less risk. The trick is in how we choose to measure the dynamic duo of risk and return.

Of the two, measuring performance is probably more intuitive. We calculate the average annualized return over multiyear and/or rolling time periods. Or we can represent performance by the growth of $10,000 over various time frames.

We see in the "Risk and Return" table several measures of performance, or return. For example, the 46-year average annualized return of large-cap U.S. stocks is 10.27%.

As a comparison, we also see the performance of a diversified seven-asset portfolio (consisting of large-cap U.S. stocks, small-cap U.S. stocks, non-U.S. stocks, real estate, commodities, U.S. bonds and cash, all held in equal 14.29% allocations). The diversified portfolio, which is likely to be more reflective of an actual client's portfolio, had a 46-year average annualized return of 9.78% (assuming annual rebalancing).

The performance of large-cap U.S. stocks (as measured by the S&P 500) outperformed a diversified multi-asset-class portfolio using the 46-year average annualized return.

We also see the performance of the two investment models in terms of the growth of $10,000. Not surprisingly, the single-asset investment model consisting of 100% large-cap U.S. stocks had a higher ending account balance over the 46-year period than a broadly diversified model that included almost 30% fixed income.

Let's now consider several other measures of performance that take into account the short-run time horizon that governs the mindset of many clients.

Consider the average three-year rolling return, average three-year growth of $10,000 and average 10-year rolling return. When evaluating performance over shorter time frames, the gap between the all-stocks model and the diver-

Risk and Return of 2 Investment Models

46-Year Metrics of Performance and Risk, 1970–2015	100% Large-Cap U.S. Stocks	Diversified 7-Asset Portfolio
Measures of Performance (larger is better)		
46-Year Average Annualized Return (%)	10.27	9.78
46-Year Growth of $10,000	$898,201	$729,907
Average 3-Year Rolling Return (44 Periods)	10.93	10.3
Average Growth of $10,000 Over Rolling 3-Year Periods	$13,976	$13,517
Average 10-Year Rolling Return (37 Periods)	11.1	10.68
Measures of Risk (smaller is better)		
46-Year Standard Deviation of Return of Annual Returns	17.31	10.31
Percentage of Time with a Negative Calendar Year Return	20%	13%
Three Worst 1-Year Returns (%)	-37.00, -26.47, -22.10	-27.61, -5.51, -5.38,
Worst 3-Year Loss (%)	-37.61	-13.4
Average 10-Year Standard Deviation (37 rolling 10-Year Periods)	16.93	9.75
Percentage of Time Calendar-Year Return Was Below 10%	41%	39%
Percentage of Time Calendar-Year Return was Below the Return of Cash	30%	26%

Source: Lipper, calculations by author

sified model shrinks considerably, and a diversified model begins to appear much more appealing. For example, the average three-year rolling return for the all-stocks model was 10.93% compared with 10.30% for the diversified seven-asset model.

MEASURING RISK

We now turn our attention to investment risk. Measuring risk can be more complicated than measuring performance.

A traditional method is to calculate an investment's standard deviation of return. This is a measure that many of your clients probably don't connect with intuitively.

They may know that low standard deviation is preferred to high standard deviation. But beyond that, the actual size of the standard deviation means very little to most people. The only way standard deviation becomes useful is by comparison.

Toward that end, the 46-year standard deviation of annual returns for large-cap U.S. stocks is 17.31%. This is nearly twice the size of the 10.27% average annualized return. Meanwhile, a diversified seven-asset portfolio had a 46-year standard deviation of 10.31%, or just barely higher than its 46-year annualized return of 9.78%.

From this we would surmise that a diversified portfolio is less risky than a portfolio consisting of only large-cap U.S. stocks.

Let's now examine several other less commonly reported measures of risk that may be more intuitive.

THREE WORST ANNUAL RETURNS

We begin with a very common sense measure: the percentage of time the investment produced a negative calendar-year return. This is an intuitive measure for everyone, because no one likes losing money.

Over the last 46 years, large-cap U.S. stocks had a negative calendar-year return 20% of the time. By comparison, a diversified seven-asset portfolio had negative annual returns only 13% of the time.

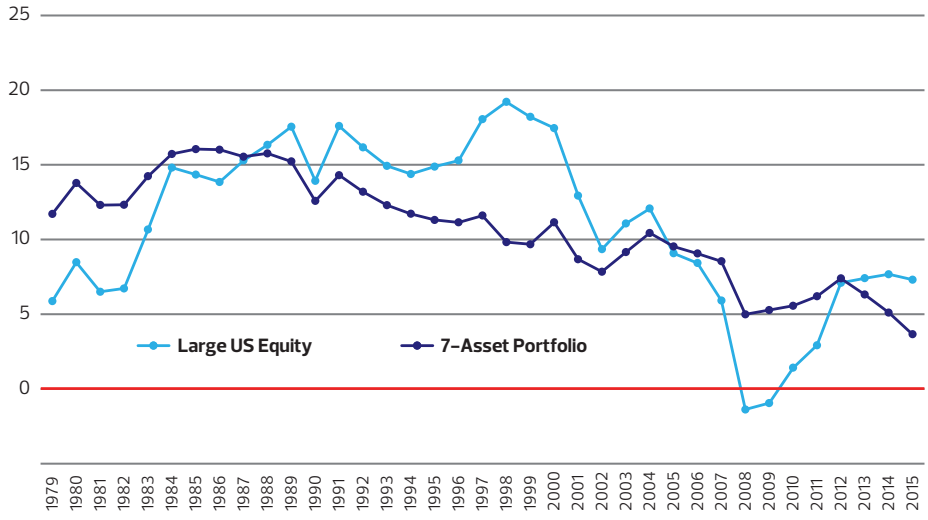
Next, we consider the three largest one-year losses. The worst one-year return for large-cap U.S. stocks was a loss of 37% (in 2008). In 1974, the S&P 500 lost 26.47%, and in 2002 it lost 22.10%.

A diversified portfolio also got roughed up in 2008, with a loss of 27.61%. But that was its only large loss in the past four and a half decades. The second-worst loss for a diversified portfolio was 5.51% in 2001, and the third-worst loss was 5.38% in 1974.

If we are measuring risk by the three worst annual returns, a diversified portfolio

The 46-year standard deviation of annual returns for large-cap U.S. stocks is 17.31%. This is nearly twice the size of the 10.27% average annualized return.

Rolling 10–Year Performance



Source: Lipper, calculations by author

is clearly a less risky approach to investing.

Another measure of risk is the worst-case three-year return, which is often described as the maximum drawdown. For an all-S&P 500 portfolio, the worst cumulative percentage loss over a three-year period from 1970 through 2015 was 37.61%. A seven-asset portfolio lost only 13.4% during its worst three-year period. Again, a diversified approach mitigates risk significantly.

Let's revisit standard deviation of return as a measure of risk, but evaluate the standard deviation over smaller, rolling time frames. This approach solves for a time-period bias that may exist over a single time frame.

There were 37 rolling 10-year periods from 1970 to 2015. The average 10-year standard deviation of return for the S&P 500 was 16.93% (and is associated with an average 10-year rolling return of 11.1%).

By comparison, the average 10-year standard deviation of return for the seven-asset portfolio was 9.75%. Interestingly, the average 10-year rolling return for the seven-asset portfolio was 10.68%. That is a stunning combination in which the average 10-year return is higher than the average 10-year standard deviation.

The next measure of risk is one that has some connections to behavioral finance or, more specifically, human expectations. This measure examines how often the calendar-year return for each portfolio was below 10%. A 10% return represents the long-run return of large-cap U.S. stocks, which many clients might use as a performance benchmark. As such, it is a target level of performance for many investors.

The S&P 500 failed to achieve a 10% calendar-year return 41% of the time over the past 46 years, whereas the seven-asset portfolio failed to achieve a 10% return 39% of the time. Close results, but a clear indication that diversification creates slightly more steadiness in performance.

Finally, we examine how often the performance of both portfolios was below the calendar-year return of cash (as measured by the 90-day Treasury bill return). The all-stocks portfolio failed to beat cash 30% of the time, compared with only 26% of the time for the diversified portfolio.

VISUALIZE RISK

Perhaps the best way to measure risk is visually. As shown in "Rolling 10-Year Performance," it's clear that a diversified portfolio has less volatility in the upward and downward swings than the S&P 500.

The S&P 500 has higher highs and lower lows, which is a classic characteristic of a non-diversified approach to investing. A diversified portfolio essentially skims off the highs and raises the lows, creating a more consistent pattern of performance over time.

As you can see in the chart, the all-U.S. stocks portfolio had a 10-year annualized return of minus 1.38% during the period from 1999 to 2008, and a return of minus-0.95% over the period from 2000 to 2009.

The devastating impact of the financial crisis is clearly evident. By comparison, the multi-asset portfolio had 10-year annualized returns of 4.99% and 5.27% over those same two 10-year periods.

Broad asset-class diversification is a natural defense against the type of equity meltdown experienced in 2008.

In summary, per our calculations, we see that the raw performance metrics reviewed here indicate that a one-asset portfolio was superior to a broadly diversified portfolio, though in some cases the margin of victory was quite small.

But if also considering risk along with performance, every measure we examined demonstrated that a diversified approach to investing is superior to an all-U.S. stocks portfolio. In many cases, the amount of risk reduction was considerable.

Raw performance may be what grabs the headlines, but consistency of performance and risk reduction along the way are far more important to those clients who are honest about their tendencies to react poorly during periods of market volatility. FP

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