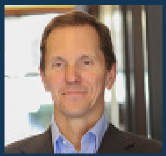
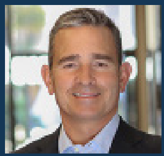

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We are all familiar with the concept of diversification, but how important is it and what does diversification really mean? The economic literature and data shed light on these questions that yield some surprising statistical observations.

In the September 2018 issue of The Journal of Financial Economics, Arizona State professor Hendrik Bessembinder published a study of individual stock performance from 1926-2015. The evidence that the stock market outperforms bonds and inflation over long time periods is based on the returns of broad stock market indexes. In a unique twist, Bessembinder decided to study individual stock returns rather than a broad market portfolio. He found some unexpected lottery-like results, highlighting the high risk of individual stocks.

For example, he found that only 47.7% of individual stocks on record from 1926-2015 had monthly returns higher than risk-free Treasury bills. He also discovered that more than half of the wealth created by the stock market was due to the performance of just 86 stocks, or 0.03% of the total number of issues. Further, he found that the top-performing 1000 stocks—only about 4% of the total—accounted for 100% of total market wealth creation (the other 96% of stocks as a group returned no more than Treasury bills).

His work shows that the wealth creation of the stock market has been concentrated in the extreme success of a very small number of companies. This suggests that owning the entire market, or as much of it as possible, is essential to increase the likelihood of capturing the returns of a sufficient number of these high-returning stocks.

A May 2021 study by Fang, Marshall, Nguyen and Visaltanachoti found that individual stock underperformance was even more prevalent internationally. They found that more than 50% of the common stocks in 55 of 57 countries from 1996-2017 underperformed local risk-free returns, and across all countries, only 42.4% of stocks outperformed local Treasuries.

These findings help explain why so many active strategies that try to pick a relatively small number of stocks with the hope of outperforming the market, most often lead to underperformance. Poorly diversified portfolios may underperform if they do not hold enough of the relatively few securities that generate large returns. Like betting on one or two numbers at a roulette table, the odds of success are low if you do not invest in large numbers of securities.

Using mutual funds or exchange traded funds offer an easy alternative to owning individual stocks but introduce another important element of diversification, getting enough exposure to the important portfolio risk factors known as beta (stock market), size (small stocks), value (low-priced stocks), momentum and profitability. Research shows these are systematic risk factors that lead to higher returns over long time periods. Total stock market funds that offer exposure to multiple asset classes have become very popular. However, a total stock market fund may not capture these risk factors because there is generally no *increased* exposure beyond market-weighted amounts.

For example, even though Vanguard Total Stock Market ETF (VTI) holds small cap stocks, its small cap premium is zero because its portfolio exposure is exactly equal to the market. For a risk factor to have a positive premium, it must have a *greater* exposure than the market. And most broadly diversified funds and index funds have relatively few assets in small cap stocks because small companies mathematically make up a very small portion of the total market capitalization.

We think this is a disadvantage to investors who are looking for higher expected returns and greater diversification. Large growth companies, with their large market capitalizations and current high valuations, make up most of these funds. VTI, for example, as of July 31 has a median market cap of $131 billion, a price-to-earnings ratio of 24.5, and almost one-fourth (23.6%) of its assets in its top 10 holdings. DFA US Small Cap Value (DFSVX) on the other hand, has a median market cap of just $2.5 billion, a price-to-earnings ratio of 11.6 and only 8% of its assets in its largest 10 holdings. We think it adds value to utilize DFSVX and other funds that similarly seek to capture strong exposure to risk factors associated with higher returns in your portfolio.

Historical data show that portfolios with smaller market capitalizations and lower valuations have higher returns. We believe this is especially important now as market valuations for large growth stocks are at historical extremes relative to small value stocks. In a May 13 perspective piece, Vanguard wrote, "Based on our fair-value model, we expect value to outperform growth over the next 10-year period by as much as 5% to 7% per year and perhaps by even more over the next five years." We agree but also want to emphasize that there are no crystal balls when it comes to investing. The best we can do is build and manage a portfolio that puts the odds in our favor. Sometimes the benefits of diversification are apparent right away, while at other times we have to be patient for them to materialize.

We also need to understand that all risk factors go through extended periods of underperformance. That is why they are called risk factors. The S&P 500 has experienced three such extended periods in which Treasury bills outperformed the index: 1929-1943 (15 years), 1966-1982 (17 years) and 2000-2012 (13 years). That is almost half (45 of 95) of all the years on record from 1926-2020. Fortunately, risk factors tend to experience their bad results at different times, which is another reason diversifying across factors is beneficial. For example, during two of the three bad periods for large growth stocks, small value stocks outperformed them significantly providing a diversified portfolio with better risk-adjusted results.

Despite knowing that all risk assets go through long periods of underperformance, our experience is that it is psychologically difficult for investors when their portfolio does worse than a popular benchmark like the Dow Jones Industrial Average or the S&P 500 Index. This should be irrelevant to someone who understands market history and the logic of diversification but humans are social creatures and there is comfort in knowing that everyone else is suffering along with you.

There are evolutionary reasons to not want to be different from others (our ancestors depended on being part of groups for survival) but we must learn to accept it if we want to position ourselves for better investment results. Think of it this way: by definition, a well-diversified portfolio is different from the aggregate of what most other investors are doing (i.e., a market-weighted portfolio). Because of this, we must be willing to experience different, unpredictable and sometimes disappointing relative returns from time to time. Of course, this is offset by periods of strong relative returns like we have enjoyed recently, and most importantly, potentially better long-term expected returns over an investment lifetime.

As always, thank you for you continued trust and confidence.

Warm regards,

Dan   Dirk

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