Diversification Takes Patience

At the very end of August I took a swipe at the whiners amongst the financial commentariat (the "whinertariat?") who were kvetching nonstop about the high correlation of returns between stocks and between various asset classes. Their complaints could be dismissed easily by looking at the declining covariance of returns across time. The message was simple: In the end, cream rises to the top; let's not talk about what settles on the bottom.
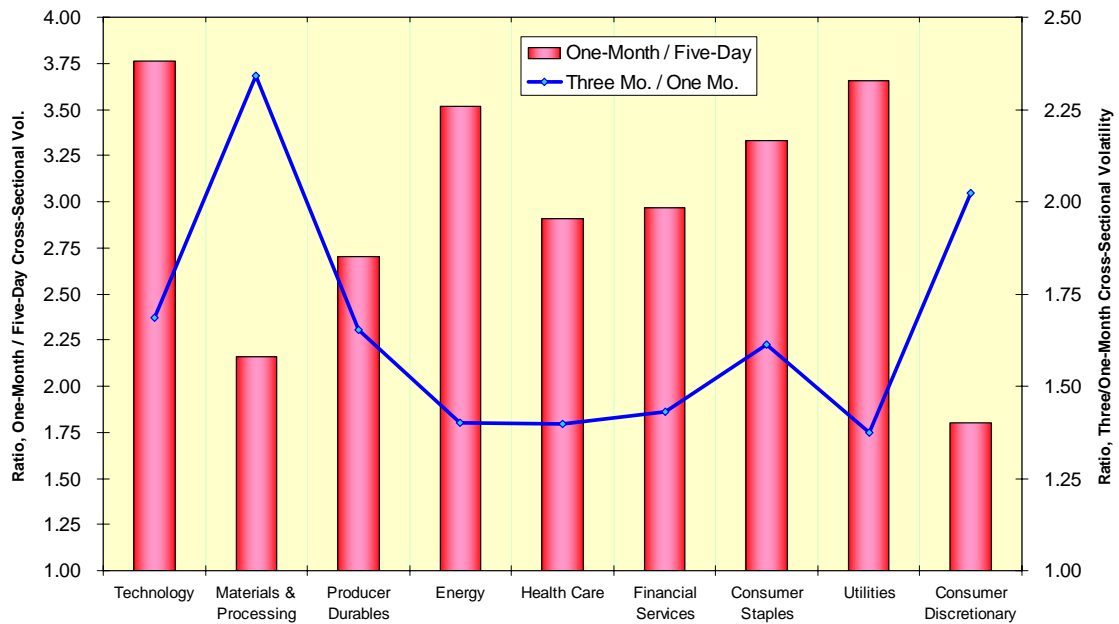
Cross-Sectional Volatility

We can reach a similar conclusion by looking at an internal measure applicable to any index, cross-sectional volatility. This is the sum of the capitalization-weighted absolute differences between the total returns for individual issues and the total return for the index over a given period. It represents the dispersion of returns within an index. Presumably, the higher the cross-sectional volatility, the more individual issue selection will matter as opposed to simply buying the index itself.

Let's take a look at these measures in practice across the nine economic sectors of the Russell 3000 index (Standard & Poor's has ten economic sectors; who shall go to 11?) over five-day and both one- and three-month periods. The data are sorted along the three-month dimension. Unsurprisingly, the technology sector has the highest dispersion over both the one- and three month periods, but the ranks do change as a function of time. The vast consumer discretionary sector has the lowest cross-sectional volatility over all three time periods, and by a goodly margin.

Russell 3000 Economic Sector Cross-Sectional Volatility
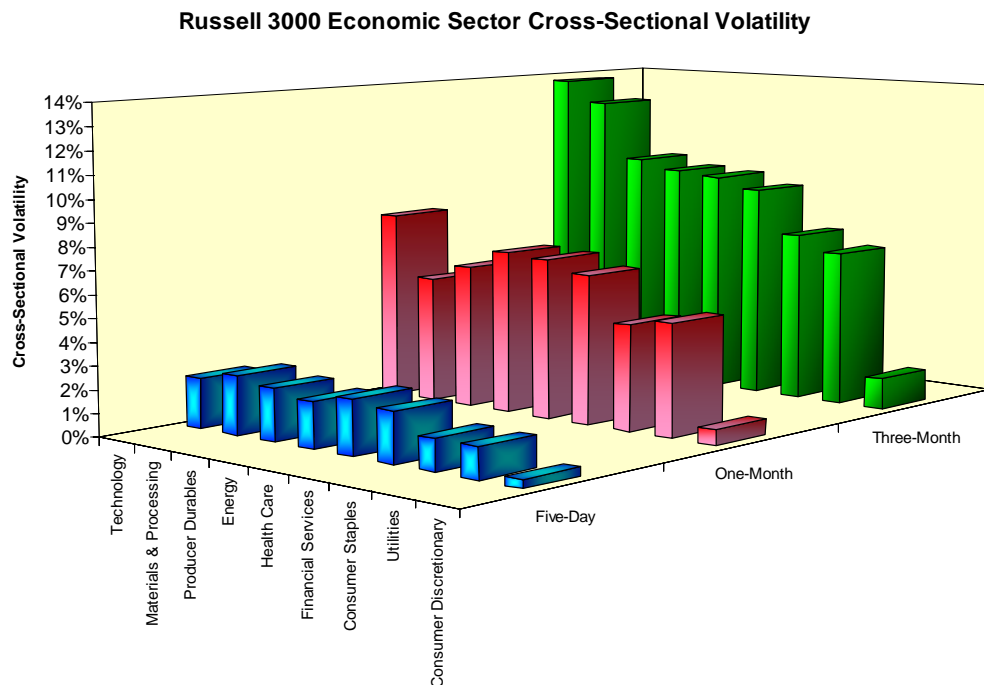
If the cross-sectional volatility measures appear to rise over time, they do. Let's rearrange the data in the chart above to ratios of the one-month to five-day and three-month to one-month cross-sectional volatilities. Not only are all ratios greater than the 1.00 level indicative of rising cross-sectional volatility over time, their ratios switch ranks across sectors. Both measures indicate that rewards to diversification increase not only over time but across sectors as well.

Dispersion Of Returns Increases Over Time

What do these patterns mean for investors as a practical matter? Consider that very low cross-sectional volatility for the consumer discretionary sector; it argues you might as well buy the Select Sector SPDR instead of pondering which individual issues to buy if you think consumers are going to reach into the wallets. This may be somewhat surprising given the very different nature of the top five issues in this sector: McDonald's, Disney, Ford, Comcast and Amazon.com. These may look like very different firms, and indeed they are, but the numbers say you might as well buy the index.

The opposite assumption applies to the high-dispersion technology sector. Here the top five holdings in the XLK exchange-traded fund, Apple, Microsoft, IBM, AT&T and Google give the impression of rising and falling together, but that apparently is not the case.

The moral of the story is simple and clear: Diversification still exists, but it takes a little longer to provide its rewards than it did previously. How painful is that in our IM and Twitter world?