Benefits CANADA

Narrowing down the risk factors

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The past year has been a dramatic reminder that risk factors are numerous, complex and hard to control. But research shows that there is one relatively straightforward investment approach that can control relative risk in an equity portfolio, without sacrificing alpha: sector neutrality.

Which risk factors matter most?
Portfolio managers, of course, try to avoid unintended risk in their portfolios. One popular set of portfolio management risk tool is the Barra Models. Barra analyzes the risk inherent in a stock or portfolio by examining its exposure to the Barra risk factors. These factors include: size of the stock, success of the stock, variability in the markets and value. But are these factors the best predictors of risk? Could sector deviations more effectively predict risk?

To test how successful a sector-neutral approach could be, we analyzed stock performance over various periods to see how much of a stock's volatility can be explained by Barra risk factors and how much can be explained by its sector. In other words, we wanted to know whether a stock's return is more heavily influenced by Barra risk factors or sector factors.

In one study, we looked at Canadian market data from January 1995 to March 2009. During this period, we found that only 12% of the cross-sectional variance in returns was explained by Barra risk factors in aggregate, while 33% could be explained by sector factors.

These results held up over time. We ran the same analysis on a time-series basis, looking at how individual stocks performed over multiple time periods. In this case, sector factors accounted for 53% of the variance while Barra factors accounted for only 13%.

We then went farther afield, applying the same analysis to all the G7 countries, and found similar patterns.

Super sector risk factors vs. Barra risk factors
Another way to look at how sectors explain risk is to analyze performance within "super sectors"—larger groupings of Global Industry Classification (GIC) sectors that fit in the same general categories. What would happen to return variance in a portfolio that was "super-sector neutral"?

We based our analysis on the following four super sectors, using a minimum of two GIC sectors in each:

- consumer (consumer discretionary, consumer staples, healthcare)
- industrials (industrials, information technology)
- resources (energy, materials)
- interest rate-sensitive (financials, telecommunication services, utilities)

This approach would provide a portfolio manager with additional flexibility, since he or she would not need to adhere strictly to the weightings of each of the 10 GIC sectors. In this scenario, once again, super-sector factors were found to explain more return variance than the aggregate Barra risk factors. We found that 23% of return variance and 43% of time-series return variance was explained by super sector factors, as opposed to 12% and 13%, respectively, for the Barra risk factors.

A further advantage of a sector-neutral approach is that sector factors can be controlled more easily than other factors. Sector classifications change infrequently, whereas exposure to Barra factors can change radically, sometimes very quickly. Relative ease of execution and cost effectiveness are therefore other advantages of implementing a sector-neutral approach.

So why not make sector bets?

While it is true that making the right sector bet can be very remunerative in the short term it's very difficult to choose the right sector consistently. Although some portfolio managers have had occasional successes with this approach, there are virtually none who have managed to consistently pick the right sectors over the long term. Moreover, attempting to do so can lead to a lot of volatility, without the potential for the sorts of returns that make that additional volatility worthwhile. Market timing and sector rotation are more often than not value-detracting strategies over the long-term.

A powerful risk management tool

Within a sector-neutral portfolio, there is plenty of opportunity for portfolio managers to increase returns, while controlling a substantial amount of a portfolio's relative risk.

Within each sector, there is a wide variation in individual stock performance. Even when a sector is underperforming, there are usually subsectors and specific stocks that are experiencing relative success. For example, during the recent crisis, banks suffered greatly, but certain financial sub-sectors, such as property and casualty insurance, continued to provide decent returns.

Fidelity's basic philosophy has always been that investment success lies in picking the best individual securities based on fundamental, bottom up research, rather than making general bets based on predictions about the economy, the future of particular industries and sectors. A sector-neutral approach puts this philosophy into practice: managing sector risk provides a straightforward and effective way for controlling portfolio relative risk, without sacrificing alpha.

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