Factor/Style Investing

Momentum Crashes

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A momentum strategy is a bet that past returns will predict future returns in the cross-section of assets, and is typically implemented by buying past winners and selling past losers. Momentum is pervasive: the academic finance literature documents the efficacy of momentum strategies across time periods, markets and asset classes. Momentum is a strategy employed by quantitative investors and even by mutual fund managers.

Despite the pervasive evidence of momentum, the underlying mechanism responsible for its returns is as yet unknown. By virtue of the high Sharpe ratios associated with momentum strategies, the return patterns are difficult to explain within the standard rational-expectations asset pricing framework.

In "normal" environments we see consistent price momentum that is both statistically and economically strong and manifests itself across numerous equity markets and a wide range of diverse asset classes.

However, in extreme market environments after a long market downturn, the market prices of past losers embody a very high premium. When poor market conditions ameliorate and the market starts to rebound, the losers experience strong gains, resulting in a "momentum crash" as momentum strategies short these assets.

Since part of these crash periods are predictable, we use bear market indicators and volatility estimates to forecast the conditional mean and variance of momentum strategies. Armed with these estimates, we create a simple dynamically weighted version of the momentum portfolio that approximately doubles the Sharpe ratio of the static strategy — and does so consistently in every market, asset class and time period we study.

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