Alternative Investing

Time Series Momentum

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We document an asset pricing anomaly we term "time series momentum," which is remarkably consistent across very different asset classes and markets. Specifically, we find strong positive predictability from a security's own past returns for a set of 58 diverse futures and forward contracts that include country equity indices, currencies, commodities and sovereign bonds over more than 25 years of data.

We find that the past 12-month excess return of each instrument is a positive predictor of its future return. This time series momentum or "trend" effect persists for about a year and then partially reverses over longer horizons. These findings are robust across a number of sub-samples, look-back periods and holding periods. We find that 12-month time series momentum profits are positive not just on average across these assets, but for every asset contract we examine.

Time series momentum is related to, but different from, the phenomenon known as "momentum" in the finance literature, which is primarily cross-sectional in nature. The momentum literature focuses on the relative performance of securities in the cross section, finding that securities that recently outperformed their peers over the past 3 to 12 months continue to outperform their peers on average over the next month. Rather than focus on the relative returns of securities in the cross section, time series momentum focuses purely on a security's own past return.

Decomposing both time series and cross-sectional momentum profits, we find that the dominant force to both strategies is significant positive auto-covariance between a security's excess return next month and its lagged one-year return.