September 2017 Investment Publications Highlights

News vs Sentiment: Predicting Stock Returns from News Stories

Steven L. Heston and Nitish Ranjan Sinha, *Financial Analyst Journal*, CFA Institute, vol 73, no 3 (Third Quarter 2017):67–83

The authors test how well sentiment from news stories predicts future stock returns. They conclude that daily news stories predict returns for two days, while the total sentiment of all news stories aggregated over a week can predict returns for up to one quarter.

As computing technology has improved, practical applications for quantitative investment analysis have increased. Breakthroughs in areas such as artificial intelligence, neural networks, and machine learning now allow investors to conduct analyses almost instantaneously on topics that would have previously taken a team of analysts weeks to complete. One such type of analysis is quantifying news stories on companies into useful signals of market sentiment. The authors use data from more than 900,000 news stories from 2003 through 2010 to determine if analyzing news story sentiment helps predict persistent future returns for individual companies.

The authors found that both positive and negative news articles tended to predict the direction of returns for the following two days, but not further. However, when the total sentiment of all news stories related to a particular stock were aggregated over a week, the sentiment could predict the direction of returns over the following quarter.

The analysis includes a few interesting nuances, such as the saying "no news is good news" may not be true—companies that received no news at all tended to underperform companies that received neutral news. This was particularly true for small companies. However, companies that experienced positive news tended to perform the best, and companies that experienced negative news tended to perform the worst.

To ensure the apparent connection between news story sentiment and future returns was not simply the result of a common predictor of both, the authors adjusted for the two most highly correlated common factors: momentum and earnings surprises. The news sentiment effects on future returns still remained statistically significant.

Contagious Investor Sentiment and International Markets

Todd Feldman and Shuming Liu, *The Journal of Portfolio Management*, vol 43, no 4 (Summer 2017):125–136

The authors examine how investor sentiment is correlated across select international markets. They find that sentiment is more correlated during bear markets versus bull markets and argue that portfolio managers can leverage sentiment data to improve estimates of future return correlation.

The authors develop a unique methodology to track investor sentiment. This methodology captures data related to two investor biases—loss aversion (the idea that investors are affected more by losses than gains) and recency (the

tendency to put too much weight on recent returns in thinking about the near-term future). The data are collected from individual fund managers from January 1989 through December 2012 and used to construct sentiment indexes for six developed stock markets (Australia, Canada, Europe, Japan, the United Kingdom, and the United States).

Their results show that sentiment is more correlated during bear markets than bull markets. Moreover, using regression analysis, the authors find that sentiment correlations can forecast future return correlations across 13 of the 15 market pairs. For example, a 1% increase in the one-year sentiment correlation between the United States and Europe leads to an increase in the future one-year return correlation between the two markets of 0.65%.

The authors explain the important role this analysis could play in asset allocation across international stock markets. Portfolio managers could construct better diversified portfolios by leveraging sentiment data to improve predictions of future returns correlations. When sentiment across markets becomes more correlated, portfolio managers invested in those markets could adjust their allocations to reflect an expectation that future returns are likely to be more correlated as well.

Popularity and Asset Pricing

Thomas M. Idzorek and Roger G. Ibbotson, *The Journal of Investing*, vol 26, no 1 (Spring 2017): 46–56

The popularity pricing theory argues that assets perceived by investors as attractive are likely to be more expensive than those perceived as unattractive. The authors find that this theory is consistent with the known premiums and anomalies seen in capital markets.

According to popularity theory, assets are defined by a number of financial and sentimental characteristics. These characteristics are either liked or disliked by investors, with asset prices determined by these preferences. A popularity return premium is earned by investors willing to hold unpopular assets, supplied by investors willing to hold the popular, more expensive assets.

Popularity is best illustrated by considering the well-known equity risk premium. Equities are inherently riskier than bonds, and the higher relative risk of equities in this context would be defined as an unpopular characteristic. Consequently, investors willing to hold equities instead of bonds are compensated with a return premium.

Along with the equity risk premium, the authors find that the popularity framework is consistent with size, value, and liquidity premiums. They also consider qualities inherent to popularity, finding that assets with unpopular characteristics such as low competitive advantage, low brand power, and bad reputation consistently generate higher returns relative to assets with more desirable characteristics. Over the long term, premiums for unpopular characteristics are relatively stable.

The authors propose a multi-factor, linear asset pricing formula based on popularity theory. In essence, their equation is the capital asset pricing model adjusted to account for rational and behavioral models. While the authors admit their formula is incomplete, they consider popularity to be a unifying asset pricing theory, marrying the ideas of traditional risk/return and efficient markets with behavioral finance. ■

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