



How Much Market Noise? Look Out the Window

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Who knew that country-western crooner Waylon Jennings wrote songs about equity markets? Well, not exactly. But the lyric, “When I’m down I can’t stand cloudy days,” might furnish an anthem for a new research paper out of Wharton: “Disclosure and Noise Trade.”

As a way to estimate levels of uninformed, sentiment-based effects, or “noise,” in global markets, co-authors Brian Bushee, the Gilbert and Shelly Harrison associate professor of accounting at Wharton, and Henry Friedman, a Ph.D. candidate in accounting, looked skywards. They probed correlations between local weather conditions and market activity in 46 countries from 1995 through 2009. They also aimed to test whether high-quality disclosure standards mute sentiment-based noise in investment returns.

“If returns are essentially reacting to local cloudiness, it probably reflects noise in returns,” says Friedman. “That’s a neat way of essentially seeing how noise trades differ across countries and markets.”

Prior research linked a very small but discernable portion of market returns to urban cloud cover. The new paper goes a step further. It furnishes a proxy for the precise extent to which noise affects local markets. It attempts to separate returns due to sentiment-based noise from returns grounded in sound market information — day-by-day and market-by-market. “We were trying to get some initial evidence on how disclosures standards actually affect noise,” Friedman says.

In theoretical models of capital markets, noise distorts information embedded in prices and capital allocation and contributes to systematic risk and asset bubbles. Nevertheless, empirical research on the causes and consequences of noise trade is scarce. The reason, says Friedman: Noise in prices and returns is difficult to measure. Methods that capture noise also capture information.

A wealth of very granular data from the National Oceanic and Atmospheric Administration, an arm of the Department of Commerce, furnished a quantitative yardstick for comparing noise levels. For every country and year, researchers estimated the average effect of cloudiness on index returns. They used this estimated effect, scaled by a proxy for the precision of the estimate, as a measure of sentiment-based noise at the country-year level.

When clouds parted, 34 of 46 countries showed positive average sentiment-based noise with an adverse impact on market returns. Spain was noisiest, followed by the Netherlands, Columbia, Denmark and Italy, with the U.S. number ten. Finland had the least noise. The U.K., Australia, Taiwan, Singapore, Canada and Hong Kong clustered around the median.

Noise variation from one country to another suggests that unique local market factors mitigate or exacerbate the effect of sentiment on market returns, says Friedman. Preliminary evidence supports the hunch. “Once we control for economic development,” Friedman says, “there is a negative and significant relation between disclosure standards and noise.” In other words, higher quality disclosure should put a brake on sentiment-based trading that inflates financial bubbles.

A better handle on sentiment-based noise won't banish it from the marketplace — and shouldn't, says Friedman. Some level of market noise has value, chiefly by adding market liquidity. Noisier markets also tend to reduce the speed with which private information finds its way into the stock price — a more level playing field for investors usually motivated by noise and their informed counterparts.

“Disclosure and Noise Trade” lacks final answers to sweeping questions about market

efficiency where noise is just one component. But for investors who want a finer focus on market volatility, the cloud cover proxy for noise helps clear the air.