

Social media can influence stock returns, finance professor says

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Alexander Kurov has studied Twitter's effect on the stock market. Credit: Brian Persinger/West Virginia University WVU's Alex Kurov has studied Twitter's effect on the stock market. Credit: WVU Photo

Twitter's impact is not limited to news, sports and political opinions.

Posts on the social media platform can influence [stock returns](#), according to research led by a West Virginia University financial expert.

Alexander Kurov, Fred T. Tattersall Research Chair and Professor of Finance in the John Chambers College of Business and Economics, found that firm-level Twitter content has information useful for predicting next-day stock returns, and that it is a stronger predictor of returns for firms with less analyst coverage.

Kurov co-authored the study, "Informational role of social media: Evidence from Twitter sentiment," with Chen Gu, a 2018 graduate of the WVU finance doctoral program. Their findings are being published in the *Journal of Banking and Finance*.

In reaching their conclusions, Kurov and Gu obtained data from Bloomberg, which classifies individual tweets about a given company, aggregates them and calls the resulting variable "Twitter sentiment."

"Academic research in finance generally shows that investor sentiment tends to be driven by investor beliefs or feelings not justified by fundamentals, such as facts and rational expectations that should determine the value of a stock," Kurov said. "Our results show, however, that Twitter sentiment contains relevant information not yet reflected in [stock prices](#)."

"In particular, we show that Twitter sentiment contains information about upcoming analyst recommendation changes, analyst target price changes, quarterly earnings surprises and opening [prices](#) of stock initial public offerings."

Since 2013, the Securities and Exchange Commission has allowed public firms to distribute news, such as quarterly earnings, to the public via Twitter. The increased use of Twitter by firms and investors—including

famous names like Warren Buffett—spurred Kurov and Gu to research the matter and determine how social media can be employed as part of an investment strategy.

Kurov also pointed to events in which information was prematurely revealed on Twitter, leading to large moves in stock prices.

For example, at a 2016 conference of the American Diabetes Association, the results of a clinical trial of Victoza, a new diabetes drug produced by Novo Nordisk, were announced during a presentation. While the ADA asked attendees to keep that information confidential, pictures of presentation slides showing those results popped up on several Twitter accounts within minutes.

Novo's stock price fell by 5.6 percent the following day because the new drug appeared less effective than expected.

"On the one hand, it is possible that tweets mentioning companies have little new relevant information," Kurov said. "In that case, Twitter content is just random noise that should have no permanent effect on stock prices. On the other hand, Twitter may aggregate bits and pieces of [relevant information](#) from diverse sources. We wanted to see which of these two plausible stories has more support in the data. Some previous studies have looked at information content of Twitter messages, but we were the first to test systematically if these messages contain useful information about thousands of individual stocks."

These findings have important implications for market participants, Kurov added. Traders should now analyze social media content carefully, and entities should continue to improve transparency and market efficiency by utilizing social media, he said.

And despite the evidence that tweets can influence [stock](#) prices, Kurov

said it is unlikely that firms or investors can systematically manipulate stocks through Twitter activity.

"If a Twitter feed consistently disseminates information that is not factual, investors will quickly figure this out," he said. "Furthermore, spreading false [information](#) with intent to manipulate security prices is illegal and could make the person doing that a target of an investigation by the Securities and Exchange Commission."

Provided by West Virginia University

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