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How your firm's Tweets affect its value—both temporarily and permanently

October 14 2021

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Researchers from University of Edinburgh and University of Maryland published a new paper in the *Journal of Marketing* that examines the impact of firm-generated social media content on firm stock price in real time.

Firms increasingly follow an 'always on' approach to social media marketing and post social media content multiple times during a day. For example, 92% of firms use their Twitter accounts more than once a day, with 42% of those tweeting 1—5 times a day and 19% tweeting 6—10 times a day. Although marketing managers engage heavily with this contemporary marketing practice, they are unable to demonstrate its immediate contribution to firm's financial outcomes.

This new research uses a combination of tweets disseminated by a sample of S&P 500 IT firms and ultra-high frequency trading data to examine the impact of firm-generated social media content on firm stock price in real time. The price impact estimation approach exploits the variance of sub-second level changes in stock price to capture the temporary and permanent stock price impacts of firm-generated tweets. Firms should aim for their firm-generated content to induce permanent price impact because it reflects information about the value of their firm. Temporary price impact can increase transaction costs for investors and the cost of capital acquisition for firms themselves because it reflects uncertainty about firm value. One could say, therefore, that permanent price impact is positive, while temporary price impact is undesirable, and potentially negative, especially if it leads to a higher firm cost of capital.

The researchers find that firm-generated tweets induce both permanent and temporary price impacts, which are linked to the tweet attributes of valence (i.e., positive and negative sentiment) and subject matter (i.e., consumer and competitor orientation).

Tweets reflecting negative or positive valence are consistently linked with a reduction in permanent price impact and an increase in temporary price impact as measured by the variance in stock price. Similar findings are obtained for tweets that only reflect a consumer or competitor orientation, although the impacts are smaller. Thus, both findings indicate that tweets reflecting only valence (positive or negative) or subject matter (consumer or competitor orientation) are associated with an increase in temporary price impact and a decrease in permanent price impact. "Our results show the importance of interaction effects between tweet valence and subject matter in generating permanent price impact. The average negative and positive valence tweet when viewed through the lens of consumer or competitor orientation generates a permanent price impact, while a competitor-oriented tweet with a negative valence is likely to have the highest permanent price impact," explains Lacka.

From the perspectives of marketing practice and intraday social media marketing strategy design, this is a crucial finding because valence as a singular attribute is associated with decreasing permanent price impact. Boyd says "The implications of our study are clear. Investors in financial markets pay attention to firm-generated social media content and their ability to act on information at sub-second levels allows for instantaneous incorporation of social media content." This is possible because of a new non-human breed of investor that now make most trade-by-trade decisions in financial markets—the so-called algorithmic traders or 'algos.' Algos scour many sources, including firms' social media content such as tweets, for any indication of firm relevant information and act on it, often all within milliseconds. Marketing managers need to be aware of this when designing social media posts and campaigns.

When social media posts contain what could be referred as "partial information" (i.e., only valence or subject matter), they lack the context that allows investors to make inferences about firm value. However, when, for example, tweet valence is set in the context of a specific subject (e.g., customer or competitor), it, on average, offers valid information that can be acted on by investors. "Our study shows that by carefully incorporating attributes, such as valence and subject matter, marketing managers can design social media content to generate varying degrees of permanent or temporary impact," Ibikunle points out.

In conclusion, these results suggest that firms should reflect valence and subject matter in their tweets if their aim is to improve the informativeness of their stocks with respect to firm value. Kannan says that "By using permanent price impact as a metric to evaluate the long-term impact of tweets, social media managers can design campaigns that have an enduring impact on firm stock price, which should be a desirable outcome for firms." Not all intraday tweets will, nor should they, induce permanent impact on a firm's stock price. Some tweets are aimed at the creation of social media 'buzz,' which is similar to the temporary price impacts we examine in this study. Firms can achieve social media 'buzz' by disseminating tweets as we show that tweets, in general, mostly generate temporary price impacts. The researchers urge caution, however, because temporary price impacts are linked to larger transaction costs for investors and cost of capital for firms.

More information: Ewelina Lacka et al, EXPRESS: Measuring the Real-Time Stock Market Impact of Firm-Generated Content, *Journal of Marketing* (2021). DOI: 10.1177/00222429211042848

Provided by American Marketing Association