

Google queries and stock market volumes related

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Financial markets and the 'swarm intelligence' of the internet are linked. This is the result of a joint study in which search engine query data are analyzed by Tobias Preis and Daniel Reith of Johannes Gutenberg University Mainz together with H. Eugene Stanley of Boston University.

"We asked the question whether or not there is a link between search volume data and financial [market fluctuations](#) on a weekly time scale", says Preis.

Search engine query data can deliver insight into the behavior of individuals who are submitting several hundred million search engine queries around the day each day. Aggregated query data provided by [Google](#) cover the time period from 2004 to present and are available for scientific use.

"Both collective 'swarm intelligence' of internet users and financial market participants can be regarded as a complex system of many interacting subunits that react quickly to external changes", explains Preis.

The authors find clear evidence that weekly transaction volumes of S&P 500 companies are correlated with weekly search volumes of corresponding company names. Thus, increasing transaction volumes coincide with an increasing number of search queries for the corresponding company name. However, stock price variations and changes of company's search volume show no significant correlation.

The authors verify this effect for individual stocks as well as for the S&P 500 on an aggregated level.

"Thus, search volume data seems to coincide with the attractiveness of trading a stock", says Reith. The authors highlight that their finding can be of crucial importance for a deeper understanding of financial markets' complexity.

More information: Tobias Preis, et al. "Complex dynamics of our economic life on different scales: insights from search engine query data", *Philosophical Transactions of the Royal Society A* 368, 5707-5720
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