

Innovation and speculation drive stock market bubble activity, according to new study

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A group of data scientists conducted an in-depth analysis of major innovations and stock market bubbles from 1825 through 2000 and came

away with novel takeaways of their own as they found some very distinctive patterns in the occurrence of bubbles over 175 years.

The study to be published in the August edition of the INFORMS journal *Marketing Science* is titled "Two Centuries of Innovations and Stock Market Bubbles," and is authored by Alina and Sorin Sorescu of Mays Business School at Texas A&M University; Will Armstrong of the Rawls College of Business at Texas Tech University; and Bart Devoldere from the Vlerick Business School in The Hague, The Netherlands.

The authors detected bubbles in approximately 73 percent of the innovations they studied, revealing the close relationship between innovation and stock market bubbles. Further, they found that the magnitude of the bubbles is tied to the awareness levels or visibility of each innovation. In other words, the more broadly known the innovation, the more likely the presence of a stock market bubble in the industry where the innovation is introduced.

But awareness and innovation aren't the only drivers for the [stock market bubbles](#). The higher degree of "radicalness" for innovations is more likely to bolster the clout of the specific innovation in the marketplace, otherwise known as an "indirect network effect."

This enables companies to raise more equity capital during bubble periods as compared to non-bubble periods, and that new capital is tied to faster and stronger increased awareness of the innovation even after the bubble bursts.

In the end, the authors found that the stocks of innovating companies outperform the market from the start to the end of the bubble, which suggests that the innovations add value to both the company and to the large economy, in spite of the presence of bubbles.

"While some of our findings provide a retrospective look at stock market activity over 175 years, and prior to the continued innovations we've seen the past 18 years, one realization for us has been that traditional financial economics may not have viewed innovation with enough specificity," said Sorin Sorescu. "A good deal of literature in financial economics on stock market bubble activity tends to view innovation as an something generated by an aggregate production function," said Alina Sorescu.

"What it doesn't do is approach innovation as a collection of products with distinct characteristics. Studies in this area rarely incorporate a formal statistical measurement of [market](#) bubbles. Instead they rely on hindsight analysis of [stock](#) price fluctuations with little attempt to link those movements to specific innovations.

"Our study is the first to look at the occurrence of bubbles in association with a large set of specific innovations introduced across two centuries, and to measure bubbles using statistical tests. We are also the first to show that firms can benefit from bubbles driven by [innovation](#). This is in contrast to the conventional thinking that that bubbles are detrimental that have few, if any, positive effects."

More information: Alina Sorescu et al. Two Centuries of Innovations and Stock Market Bubbles, *Marketing Science* (2018). [DOI: 10.1287/mksc.2018.1095](https://doi.org/10.1287/mksc.2018.1095)

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