https://www.nytimes.com/2017/10/19/business/stock-market-crash-1987.html

## A Stock Market Panic Like 1987 Could Happen Again

On Oct. 19, 1987, the stock market fell more than 20 percent. It would be comforting to believe a crash couldn't recur. But we are still at risk.

By ROBERT J. SHILLER OCT. 19, 2017



Frenzied traders on the floor of the New York Stock Exchange on Oct. 19, 1987.

Oct. 19, 1987, was one of the worst days in stock market history. Thirty years later, it would be comforting to believe it couldn't happen again.

Yet that's true only in the narrowest sense: Regulatory and technological change has made an exact repeat of that terrible day impossible. We are still at risk, however, because fundamentally, that market crash was a mass stampede set off through viral contagion.

That kind of panic can certainly happen again.

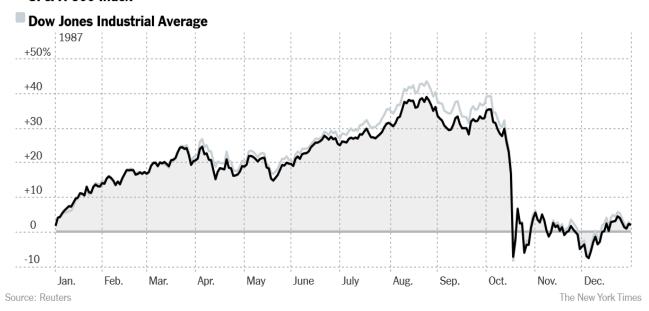
I base this sobering conclusion on my own research. (I won a Nobel Memorial Prize in Economic Sciences in 2013, partly for my work on the market impact of social psychology.) I sent out thousands of questionnaires to investors within four days of the 1987 crash, motivated by the belief that we will never understand such events unless we ask people for the reasons for their actions, and for the thoughts and emotions associated with them.

From this perspective, I believe a rough analogy for that 1987 market collapse can be found in another event — the panic of Aug. 28, 2016, at Los Angeles

International Airport, when people believed erroneously that they were in grave danger. False reports of gunfire at the airport — in an era in which shootings in large crowds had already occurred — set some people running for the exits. Once the panic began, others ran, too.

That is essentially what I found to have happened 30 years ago in the stock market. By late in the afternoon of Oct. 19, the momentous nature of that day was already clear: The stock market had fallen more than 20 percent. It was the biggest one-day drop, in percentage terms, in the annals of the modern American market.

## S. & P. 500 Index



I realized at once that this was a once-in-a lifetime research opportunity. So I worked late that night and the next, designing a questionnaire that would reveal investors' true thinking.

Those were the days before widespread use of the internet, so I relied on paper and ink and old-fashioned snail mail. Within four days, I had mailed out 3,250 questionnaires to a broad range of individual and institutional investors. The response rate was 33 percent, and the survey provided a wealth of information.

My findings focused on psychological data and differed sharply from those of the official explanations embodied in the report of the Brady Commission the task force set up by President Ronald Reagan and chaired by Nicholas F. Brady, who would go on to become Treasury secretary.

The commission pinned the crash on causes like the high merchandise trade deficit of that era, and on a tax proposal that might have made some corporate takeovers less likely.

The report went on to say that the "initial decline ignited mechanical, priceinsensitive selling by a number of institutions employing portfolio insurance strategies and a small number of mutual fund groups reacting to redemptions."

	[CIRCLE ONE NUMBER]
	" YES NO
	(1) 2
If you circl completed th enclosed env	ed 2 (you did not know about the market declines) you have is questionnaire. Please return the questionnaire in the elope.
2. When did on October 1	you first hear that there were above-average stock market drops 9, 1987?
	Date (October 19 or later) Oct 19
	Approximate time of day all during the day
3. Roughly h 19, 1987?	ow many people did you talk to about the stock market on October
	Number of people
4. How many	times did you check stock prices on October 19, 1987?
COMMENTS:	Number of times every hour

A portion of one of the responses to the survey.

<u>Portfolio insurance</u>, invented in the 1970s by <u>Hayne Leland</u> and <u>Mark Rubinstein</u>, two economists from the University of California, Berkeley, is a phrase we don't hear much anymore, but it received a lot of the blame for Oct. 19, 1987.

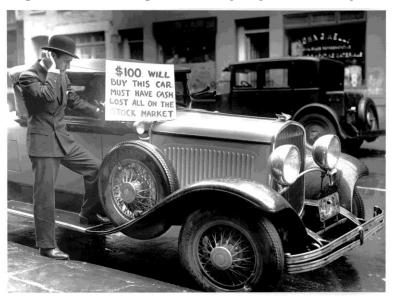
Portfolio insurance was often described as a form of <u>program trading</u>: It would cause the automatic selling of stock futures when prices fell and, indirectly, set off the selling of stocks themselves. That would protect the seller but exacerbate the price decline.



An avalanche of sell orders exhausted traders in New York.



The panic in New York spread to the Sydney Stock Exchange in Australia.



A car for sale after its owner lost money in the 1929 stock market crash.

The Brady Commission found that portfolio insurance accounted for substantial selling on Oct. 19, but the commission could not know how much of this selling would have happened in a different form if portfolio insurance had never been invented.

In fact, portfolio insurance was just a repackaged version of the age-old practice of selling when the market started to fall. With hindsight, it's clear that it was neither a breakthrough discovery nor the main cause of the decline.

Ultimately, I believe we need to focus on the *people* who adopted the technology and who really drove prices down, not on the computers.

Portfolio insurance had a major role in another sense, though: A narrative spread *before* Oct. 19 that it was dangerous, and fear of portfolio insurance may have been more important than the program trading itself.

On Oct. 12, for instance, The Wall Street Journal said portfolio insurance could start a "huge slide in stock prices that feeds on itself" and could "put the market into a tailspin." And on Saturday, Oct. 17, two days before the crash, The New York Times said portfolio insurance could push "slides into scary falls." Such stories may have inclined many investors to think that *other* investors would sell if the market started to head down, encouraging a cascade.



Newspapers grappled with the biggest one-day stock market decline, in percentage terms, in Wall Street's modern history.

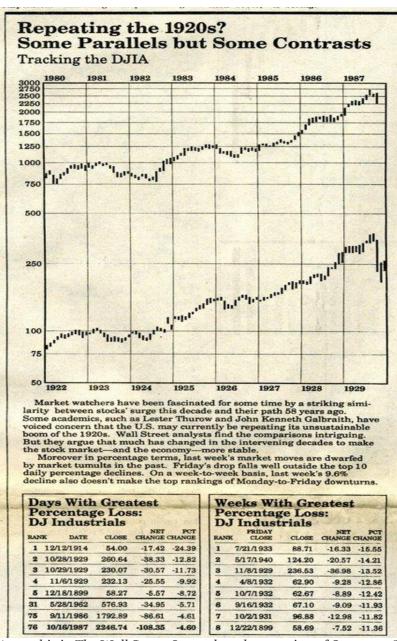
In reality, my own survey showed, traditional stop-loss orders actually were reported to have been used by twice as many institutional investors as the more trendy portfolio insurance.

In that survey, I asked respondents to evaluate a list of news articles that appeared in the days before the market collapse, and to add articles that were on their minds on that day.

I asked how important these were to "you personally," as opposed to "how others thought about them." What is fascinating about their answers is what was missing from them: Nothing about market fundamentals stood out as a justification for widespread selling or for staying out of the market instead of buying on the dip. (Such purchases would have bolstered share prices.)

Furthermore, individual assessments of news articles bore little relation to whether people bought or sold stocks that day.

Instead, it appears that a powerful narrative of impending market decline was already embedded in many minds. Stock prices had dropped in the preceding week. And on the morning of Oct. 19, a graphic in The Wall Street Journal explicitly compared prices from 1922 through 1929 with those from 1980 through 1987.



A graphic in The Wall Street Journal on the morning of Oct. 19, 1987, compared current stock trends with those of the 1920s.

The declines that had already occurred in October 1987 *looked* a lot like those that had occurred just before the October 1929 stock market crash. That graphic in the leading financial paper, along with an article that accompanied it, raised the thought that *today*, *yes*, *this very day* could be the beginning of the end for the stock market. It was one factor that contributed to a shift in mass psychology. As I've said in a previous column, markets move when other investors believe they know what other investors are thinking.

In short, my survey indicated that Oct. 19, 1987, was a climax of disturbing narratives. It became a day of fast reactions amid a mood of extreme crisis in which it seemed that no one knew what was going on and that you had to trust your own gut feelings.









The week of Oct. 19, 1987, people around the country kept a close eye on the market. Top left and right, people outside Fidelity Investments at 51st Street and Park Avenue in New York; bottom right, pedestrians in Washington looking at a stock monitor; bottom left, traders on the New York Stock Exchange floor.

Given the state of communications then, it is amazing how quickly the panic spread. As my respondents told me on their questionnaires, most people learned of the market plunge through direct word of mouth.

I first heard that the market was plummeting while lecturing to my morning class at Yale. A student in the back of the room was listening to a miniature transistor radio with an earphone, and interrupted me to tell us all about the market.

Right after class, I walked to my broker's office at Merrill Lynch in downtown New Haven, to assess the mood there. My broker appeared harassed and busy, and had time enough only to say, "Don't worry!"

He was right for long-term investors: The market began rising later that week, and in retrospect, stock charts show that buy-and-hold investors did splendidly if they stuck to their strategies. But that's easy to say now.

Like the 2016 airport stampede, the 1987 stock market fall was a panic caused by fear and based on rumors, not on real danger. In 1987, a powerful feedback loop from human to human — not computer to computer — set the market spinning.

Such feedback loops have been well documented in birds, mice, cats and rhesus monkeys. And in 2007 the neuroscientists Andreas Olsson, Katherine I. Nearing and Elizabeth A. Phelps described the neural mechanisms at work when fear spreads from human to human.



The Chicago Stock Exchange was drawn into the market fall.

We will have panics but not an exact repeat of Oct. 19, 1987. In one way, the situation has probably gotten worse: Technology has made viral rumor transmission much easier. But there are regulations in place that were intended to forestall another one-day market collapse of such severity.

In response to the 1987 crash and the Brady Commission report, the New York Stock Exchange instituted <u>Rule 80B</u>, a "circuit breaker" that, in its current amended form, shuts down trading for the day if the Standard & Poor's 500-stock index falls 20 percent from the previous close. That 20 percent threshold is interesting: Regulators settled on a percentage decline just a trifle less than the one that occurred in 1987. That choice may have been an unintentional homage to the power of narratives in that episode.

But 20 percent would still be a big drop. Many people believe that stock prices are already very high — the Dow Jones industrial average crossed 23,000 this week — and if the right kinds of human interactions build in a crescendo, we could have another monumental one-day decline. One-day market drops are not the greatest danger, of course. The bear market that started during the financial crisis in 2007 was a far more consequential downturn, and it took months to wend its way toward a market bottom in March 2009.

That should not be understood as a prediction that the market will have another great fall, however. It is simply an acknowledgment that such events involve the human psyche on a mass scale. We should not be surprised if they occur or even if, for a protracted period, the market remains remarkably calm. We are at risk, but with luck, another perfect storm — like the one that struck on Oct. 19, 1987 — might not happen in the next 30 years.

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