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MARKETS

# Academics Clash Over VIX Bragging Rights

## The rising popularity of the stock market's most widely used 'fear gauge' amid a spell of low volatility has upped the stakes

**By Ben Eisen**
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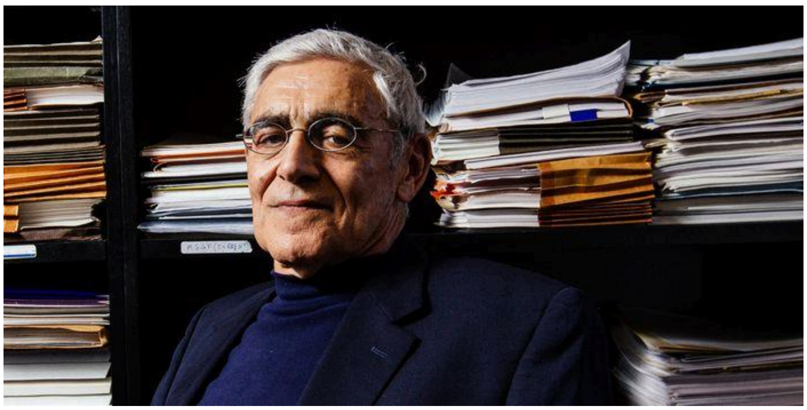

New York University finance professor Menachem Brenner says he and another academic laid the groundwork for the creation of the stock market's most widely used "fear gauge," the VIX. MICHAEL BUCHER/THE WALL STREET JOURNAL

Two academics who did early work on a gauge of stock-market volatility fear they are being written out of its history.

Menachem Brenner, a finance professor at New York University, and Dan Galai of the Hebrew University of Jerusalem called their version "Sigma" and say they pitched it to various exchanges years before the Chicago Board Options Exchange rolled out its volatility index in 1993.

The CBOE's VIX is based on the work of Vanderbilt University's Robert Whaley, who is typically credited with developing the index, widely known as Wall Street's "fear gauge" for its options-based read on expected stock-price swings. It tends to soar as stocks fall and investors turn anxious.

In academic circles, the duo has for years quietly fumed that Mr. Whaley's work is based on theirs. The popularity of the gauge has grown as it declined to record lows this year, pushing some investors to fret over market complacency.

The resulting interest in the VIX's history has prompted Messrs. Brenner and Galai to openly dispute the common knowledge of how one of the most popular market measures came to be.

"There were many occasions that I wanted to come out with it, even though it's a 20-year-old story," Mr. Brenner told The Wall Street Journal in his first public comments about the disagreement. "But every time I said, 'Let's be positive.'"

Mr. Whaley stands behind his work and the credit it has earned him as the VIX's developer. He said that while the idea of a volatility index long was discussed in general terms, including by Messrs. Brenner and Galai, he was the first to create a formula calculated in real time.

A spokeswoman for the exchange said, "CBOE engaged Professor Robert Whaley to develop the original methodology for the CBOE Volatility Index." The spokeswoman added, "The staff involved with the development of the original index are no longer at CBOE and we have no one who can comment on what transpired."

Messrs. Brenner and Galai say that at the center of their work was the idea to create what they called synthetic options prices that consistently showed implied volatility over the next 30 days. Because S&P 500 options had monthly expirations, they needed to find a way to create something that didn't exist: a series of options prices whose time until expiration never changed.

Once they had that, they say they had the pieces in place for a consistently updating index. They pitched the idea of the index to the American Stock Exchange and the CBOE in the mid-1980s, but nothing came of it, according to the two academics and correspondence written at the time. In 1989, they jointly published research on the idea of the index, as well as on a derivatives market built around the index.

Mr. Galai said he first explained the details of the work he was doing to Mr. Whaley when the two were expert witnesses on a legal case in 1988 and 1989. “We had long days and nights working on the case,” Mr. Galai said.

Mr. Whaley remembers working on that case and said a conversation about volatility indexes could have taken place although he didn’t recall anything specific. He said in a written response to questions that he had such discussions with many people during that period, given that the general idea had been circulating in certain corners of academia.

Mr. Whaley had also been doing work on volatility before CBOE hired him to create the VIX. He said that he had been aware of some of the work done by Messrs. Brenner and Galai, and cited it in research published in 1993, but that they didn’t have a formula or specific computations for index levels. He considers his creation of the formula to be the heart of his work, he said.

“The CBOE asked me to build an implied market volatility index and show them how it performed, and that’s what I did,” he said.

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