

TECH OBSERVER

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What if Software Could Tell You the CFO is Hiding Something on the Earnings Conference Call?

Kevin Maney writes: Bill Mayew, a Duke University business school prof, just told me about a research project that used voice-analysis software to rate the positive or negative emotional state of corporate CFOs and CEOs during earnings conference calls. [The results](#) sound amazing: Duke researchers found a high correlation between negative emotions detected by the software and disappointing earnings in the following quarter. In other words, the software could tell which companies were going to mess up, and do that ahead of the market and ahead of analysts revising expectations.

Cool, huh?

The research is still in early stages, but Mayew contacted me about it because the project was actually inspired by a [column I wrote in 2003](#) about technology from an Israeli company called Nemesysco. The company claimed it could use a computer and software to analyze a conversation in real time and tell whether one of the speakers was lying. In a time of Enron scandals, I included this in the column: *Perhaps big investors and Wall Street analysts could plug their phones into the software when they listen to CFOs do earnings conference calls. Cooking the books? Try explaining all those "probable false" notices flashing on the investors' screens.*

Mayew and his research partner, Mohan Venkatachalam, kept that in mind all these years, and decided to test the idea. They contacted Nemesysco -- which these days markets the software to a variety of industries, including to insurance companies to help detect fraud -- and Nemesysco agreed to help. On the Web, they got the audio files of the first-quarter 2007 earnings calls for 615 major corporations, and analyzed the voices of the CEOs and CFOs.

They plotted those results against earnings for the following quarter. "The more negative emotion there was in the voices, the worse the firm would do the next quarter," Mayew says. The emotions are too subtle for humans to pick up. The software can find it in voice patterns. And if earnings are not going in a good direction, apparently CEOs and CFOs can't completely hide it during earnings calls.

The researchers then went back to see when the stock price reflected any worries about the companies, and when analysts revised earnings estimates. Both took a while -- clearly neither investors nor analysts identify the negative emotions and act on that reading. So, basically, if you run an earnings call through this software and find negative emotions, you'd have a good chance of shorting the stock before anyone else caught on.

Mayew insists that the research is still preliminary. "This was one snapshot in time," he says. "We need to do more and compare it to other metrics."

Still, if Mayew and Venkatachalam can solidly prove the correlation, and the software works reliably, this could be wild new tool in the investment community. CEOs and CFOs wouldn't be able to hide a thing on earnings calls. Either that, or they'd start doing earnings calls by typing in text in a chat room.